

**Prepared for:**  
*Georgia Power Company*

## 2017 Annual Groundwater Monitoring and Corrective Action Report

Plant Wansley Ash Pond

January 31, 2018

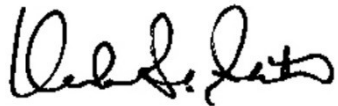
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# Georgia Power Company

## 2017 Annual Groundwater Monitoring and Corrective Action Report

Plant Wansley  
Ash Pond

January 31, 2018



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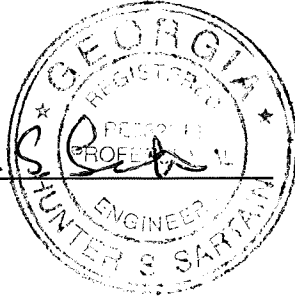
**CERTIFICATION STATEMENT**

This 2017 *Annual Groundwater Monitoring and Corrective Action Report, Georgia Power Company - Plant Wansley – Ash Pond (AP)* has been prepared to comply with the United States Environmental Protection Agency (USEPA) coal combustion residual (CCR) rule (40 Code of Federal Regulations [CFR] 257 Subpart D; published in 80 FR 21302-21501, April 17, 2015) by a licensed Professional Engineer with Environmental Resources Management - Southeast, Inc. (ERM).

**CONSULTANT**

Signature: \_\_\_\_\_

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Date: \_\_\_\_\_

*1/31/18*

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## **1.0 INTRODUCTION**

In accordance with the United States Environmental Protection Agency (USEPA) coal combustion residual (CCR) rule (40 Code of Federal Regulations [CFR] 257 Subpart D; published in 80 FR 21302-21501, April 17, 2015), this *2017 Annual Groundwater Monitoring and Corrective Action Report* has been prepared to document groundwater monitoring activities conducted at Georgia Power Company's (GPC's) Plant Wansley (the site), Ash Pond (AP) and satisfies the requirements of §257.90(e). Groundwater monitoring and reporting for the site is performed in accordance with the requirements §257.90 through §257.98.

This report documents the activities completed to establish the groundwater monitoring program and actions through the 2017 calendar year.

### **1.1 SITE LOCATION AND DESCRIPTION**

The site is located at 1371 Liberty Church Road, in northeast Heard County and southeast Carroll County, Georgia, approximately 12 miles southeast of the city of Carrollton. The plant property encompasses approximately 5,100 acres and is bounded on the east by the Chattahoochee River (Figure 1, Site Location Map). AP is located onsite northwest of the plant (Figure 2, Site Plan and Well Location Map).

#### **1.1.1 Regional Geology**

Heard County is located in the Piedmont physiographic province of Georgia. The Piedmont region of Georgia contains predominately metamorphic rock of Precambrian to Paleozoic age. Over geologic time the Piedmont has experienced multiple events of uplift, folding and faulting, alternation, and erosion.

Soils in the Piedmont formed mostly from the in-place weathering of the underlying crystalline bedrock. Near the ground surface, the soils are silt and clay-rich. Sand and fine sand become more prominent with depth. Also with increasing depth the weathered materials (saprolite) tend to retain details of the structural features of the underlying bedrock.

#### **1.1.2 Site Geology and Hydrogeology**

The site has two topographic ridges that are located northwest and southeast of the ponds; AP is located within the intervening valley. Several relatively small, intermittent and perennial creeks and streams form tributaries to the Chattahoochee, discharging into the river along the southern and eastern property boundaries. Several bedrock types have been identified at the site. Bedrock is composed of schist, gneiss, quartzite, and amphibolite have been identified in boring logs. Residual soils are primarily sandy silt, silty sand, sandy clay and silty clay which overlie bedrock across the site. Saprolitic soils were described at variable thickness across the site, but were generally encountered at or near ground surface.

Groundwater occurs across the site in the overburden soils, as well as in the underlying and hydraulically-connected bedrock. The water table surface at the site is a subdued mimic of the site topography. Top of the rock surface generally follows topography and likely controls groundwater flow direction in the uppermost aquifer as well. Groundwater generally flows to the south and east.

## **1.2 GROUNDWATER MONITORING SYSTEM**

Pursuant to §257.91, GPC installed a groundwater monitoring system within the uppermost aquifer at AP. The monitoring system is designed to monitor groundwater passing the waste boundary of AP within the uppermost aquifer. Well locations were designed to serve as upgradient or downgradient monitoring points based on groundwater flow direction (Table 1, Monitoring Well Network Summary).

## **2.0 GROUNDWATER MONITORING ACTIVITIES**

As required by §257.90(e), the following subsections describe monitoring-related activities performed during the preceding year. Since this is the first *Annual Groundwater Monitoring and Corrective Action Report*, it also describes activities performed prior to 2017 to establish the groundwater monitoring program. All groundwater sampling was performed in accordance with §257.93. Samples were collected from each well in the 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 at AP.

### **2.1 MONITORING WELL INSTALLATION AND MAINTENANCE**

In accordance with §257.91, a groundwater monitoring system was 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).

The current monitoring system was installed between December 2014 and January 2017. The monitoring system consists of 19 monitoring wells and 16 piezometers as shown on Figure 2 and presented in Table 1. Well WGWC-14 was replaced with well WGWC-14A to monitor a shallower depth in the uppermost aquifer. WGWC-14 is used to monitor groundwater elevations following installation of the replacement well.

The number, spacing, and depths of the groundwater monitoring wells are selected based on the characterization of site-specific hydrogeologic conditions and certified by a Professional Engineer (PE). Groundwater monitoring wells were designed to monitor the uppermost water-bearing zone.

## **2.2 DETECTION MONITORING**

In accordance with §257.94(b), the detection groundwater monitoring program was implemented by collecting 8 background groundwater samples. In addition, a 9<sup>th</sup> round of groundwater samples were collected as the initial detection monitoring event.

### **2.2.1 Background Monitoring**

A minimum of 8 independent samples were collected from each monitoring well within the well network and analyzed for Appendix III and IV constituents as part of the background monitoring period prior to October 17, 2017. Pursuant to §257.90(e)(3), data reports for the background sampling events are included in Appendix A, Analytical Data Reports. Background monitoring event analytical data is summarized in Table 5, Plant Wansley Ash Pond Analytical Data Summary.

### **2.2.2 Initial Detection Monitoring**

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 sections describe the methods used to conduct groundwater monitoring at AP.

### **3.1 GROUNDWATER ELEVATION MEASUREMENT**

Prior to each sampling event, groundwater elevations were recorded from piezometers and each well in the network. Groundwater elevations recorded during the background and detection monitoring events are summarized in Table 3, Summary of Groundwater Elevations. Groundwater elevation data was used to develop potentiometric surface elevation contour map (Figure 3, Potentiometric Surface Contour Map – October 2017). The general direction of groundwater flow across the site is to the south and east. The groundwater flow pattern observed during the October 2017 detection monitoring event is consistent with recordings made during the background monitoring period.

### **3.2 GROUNDWATER GRADIENT AND FLOW VELOCITY**

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

$$V = \frac{K * i}{n_e} \quad \text{Where:}$$



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

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

$$i = \text{Horizontal hydraulic gradient } \left( \frac{\text{feet}}{\text{feet}} \right)$$

$$n_e = \text{Effective porosity}$$

Hydraulic conductivity measurements were calculated from slug test data collected from the AP wells. A hydraulic conductivity value of 2.04 feet/day (ft/day) was calculated for wells screened in saprolite and partially weathered rock (PWR), where values ranged from 0.11 to 20.8 ft/day. A hydraulic conductivity value of 0.22 ft/day was calculated for wells screened in predominant bedrock, and values ranged from 0.01 to 2.27 ft/day. The representative hydraulic conductivity used in the flow velocity calculations based on the above results is 0.67 ft/day, which is within the standard range of hydraulic conductivity values for silty sands to fractured crystalline rocks (Domenico and Schwartz 1990, Freeze and Cherry 1979). An estimated effective porosity of 0.25 is used for the flow rate calculations, based review of several resources (Driscoll, 1986; USEPA, 1989; Freeze and Cherry, 1979).

The hydraulic gradient was calculated between two well pairs, WGWC-16/PZ-16 and PZ-10/WGWC-19. Groundwater flow velocities were calculated and are tabulated in Table 4, Groundwater Flow Velocity Calculations – October 2017. The average groundwater flow velocity at AP is approximately 0.14 ft/day, 51.1 ft/year.

### 3.3 GROUNDWATER SAMPLING

Groundwater samples were collected in accordance with §257.93(a). Purging and sampling was performed using bladder pumps and peristaltic pumps. For wells without dedicated (QED) bladder pumps, the pumps were lowered into the well so that the intake was at the midpoint of the well screen (or as appropriately determined by the water level). All non-disposable equipment was decontaminated before use and between well locations using procedures described in the latest version of the Region IV USEPA Science and Ecosystem Support Division (SESD) Operating Procedure for Field Equipment Cleaning and Decontamination as a guide. Monitoring wells were purged and sampled using low-flow sampling procedures.

A SmarTroll® (In-Situ® field instrument) was used to monitor and record field water quality parameters (pH, conductivity, dissolved oxygen, temperature, and oxidation reduction potential [ORP]) during well purging to verify stabilization prior to sampling. Turbidity was monitored using a LaMotte 1970-USEPA Compliant Model 2020we® or HANNA Instruments Model HI93703® USEPA and ISO Compliant turbidity meter. 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). No criterion applies if DO < 0.5 mg/L

- Turbidity measurements less than 5 NTU

Once stabilization was achieved, total, unfiltered samples were collected, placed in ice-packed coolers, and submitted to the analytical laboratory following chain-of-custody protocol.

During sampling events, where sample turbidity was greater than 5 NTU and all other stabilization criteria were met, samplers continued purging for up to 3 additional hours in order to reduce the turbidity to 5 NTU or less. When turbidity remained above 5 NTU but was less than 10 NTU, and all other parameters are stabilized, the well was sampled. Where turbidity remained above 10 NTU, an unfiltered sample was collected followed by a filtered sample that has passed through an in-line 0.45-micron filter attached to the discharge (sample collection) tube. The unfiltered sample data are used for compliance monitoring and in the statistical analysis database. Filtered sample data are used to assess the impacts of turbidity on groundwater quality.

### **3.4 LABORATORY ANALYSES**

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

Laboratory analyses were performed by the Georgia Power Company Environmental Laboratory (GPCEL) in Smyrna, Georgia, or Test America, Inc. (TAL), of Pensacola, Florida, and St. Louis Missouri. Both GPCEL and TAL are accredited by National Environmental Laboratory Accreditation Program (NELAP) and maintain a NELAP certification for all parameters analyzed. In addition, GPCEL and TAL laboratories are certified to perform analysis by the State of Georgia. Groundwater data and chain of custody records for the monitoring events are presented in Appendix A.

### **3.5 QUALITY ASSURANCE & QUALITY CONTROL**

During each sampling event, quality assurance/quality control samples (QA/QC) were collected at a rate of one sample per every 10 detection samples. QA/QC samples included field equipment rinsate blanks (FERB), field blanks (FB), and duplicate (DUP) samples. QA/QC sample data was evaluated during data validation and is 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

Statistical analysis of Appendix III groundwater monitoring data was performed pursuant to §257.93 following the PE certified statistical method for AP.

### 4.1 STATISTICAL METHOD

The statistical test used to evaluate the groundwater monitoring data will be both the interwell (boron, calcium, chloride, fluoride, sulfate and total dissolved solids [TDS]) and intrawell (pH) prediction limit (PL) method combined with the option of a 1-of-2 and 1-of-3 resample plan, respectively. The interwell PLs pool background data from the network of upgradient wells to calculate a PL, while the intrawell PLs utilize historical data from within a given well to establish a statistical limit for comparison of compliance data at the same well. An “initial exceedance” occurs when any downgradient well data exceed the PL.

If data from a sampling event initially exceed the PL, the resampling strategy may be used to verify the result. In 1-of-2 resampling, one independent resample may be collected and evaluated within 90 days to determine whether the initial exceedance is verified. In the 1-of-3 resampling, up to two independent resamples may be collected. If all resamples exceed the PL, the initial exceedance is verified and a statistically significant increase (SSI) is identified. When the resample result does not verify the initial result and exceed the PL, there is no SSI. If resampling is not performed, the initial exceedance is a confirmed exceedance.

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

- Statistical analyses are not performed on analytes containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain less than or equal to 15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the practical quantitation limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, a non-detect adjustment such as the Kaplan-Meier or Regression on Order Statistics (ROS) method for adjustment of the mean and standard deviation will be used prior to constructing a parametric prediction limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

The Sanitas Groundwater statistical software was used to perform the statistical analyses. Sanitas is a proprietary 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.

## **4.2 STATISTICAL ANALYSES RESULTS**

Analytical data from the initial detection monitoring event in October 2017 at AP was statistically analyzed in accordance with the PE-certified statistical method. Initial statistical exceedances were verified through resampling and analysis following the certified statistical method. When exceedances were not verified, an SSI was not identified. The statistical analysis and comparison to PLs are included as Appendix B.

Based on the statistical results presented in Appendix B, the following summarizes SSIs identified during the initial detection monitoring event:

- Calcium: WGWC-8, and WGWC-16
- Chloride: WGWC-8, and WGWC-16
- Fluoride: WGWC-8, WGWC-9, WGWC-15, and WGWC-19
- Sulfate: WGWC-8, WGWC-9, WGWC-15, and WGWC-16
- TDS: WGWC-8, WGWC-15, and WGWC-16
- pH: WGWC-11, and WGWC-14A

Boron was detected above the PQL in wells WGWC-8, WGWC-9, and WGWC-16. Consistent with USEPA Unified Guidance (2009), an SSI determination for boron will follow the Double Quantification Rule where detections in two consecutive monitoring events constitute an SSI. Boron concentrations in these wells are not considered an SSI at this point, and will continue to be monitored.

Pursuant to §257.94(e), within 90 days from determining an SSI, GPC will either (1) prepare a demonstration that a source other than AP 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 GPC is currently performing detection monitoring per §257.94 and has not implemented assessment monitoring at AP. Therefore, statistical analysis of the Appendix IV data has not been performed.

## **5.0 MONITORING PROGRAM STATUS**

AP is in detection monitoring. SSIs of Appendix III parameters have been identified. Pursuant to §257.94(e)(1), Plant Wansley has 90 days from the date of determination to either (1) prepare a demonstration that a source other than the Plant Wansley AP was the cause, or (2) implement

assessment monitoring per §257.95. GPC will address the reported SSIs in accordance with the requirements, and options, of §257.94(e)(1-3) and (f).

## 6.0 CONCLUSIONS & FUTURE ACTIONS

Statistical evaluations of the groundwater monitoring data for the AP identified SSIs of Appendix III groundwater monitoring parameters. In accordance with §257.94(e)(1-2), GPC will conduct an alternate source demonstration or initiate assessment monitoring program within 90 days.

The first 2018 semi-annual detection monitoring event is planned for April 2018.

## 7.0 REFERENCES

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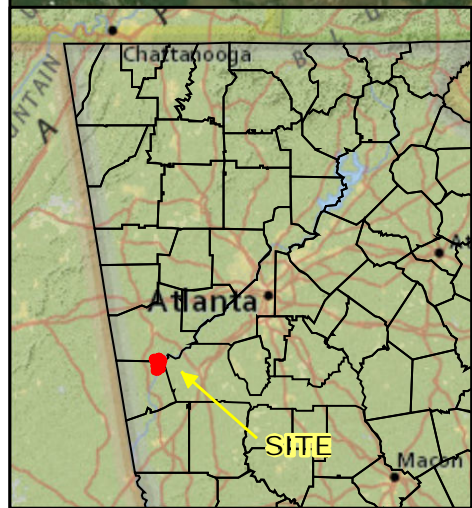
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1 inch equals 3,000 feet



**Environmental Resources  
Management**

FOR

**Georgia Power Company**

SCALE	DRAWING NAME	SHEET	CONTD	REV
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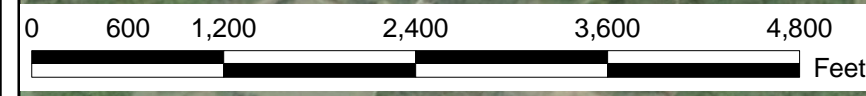
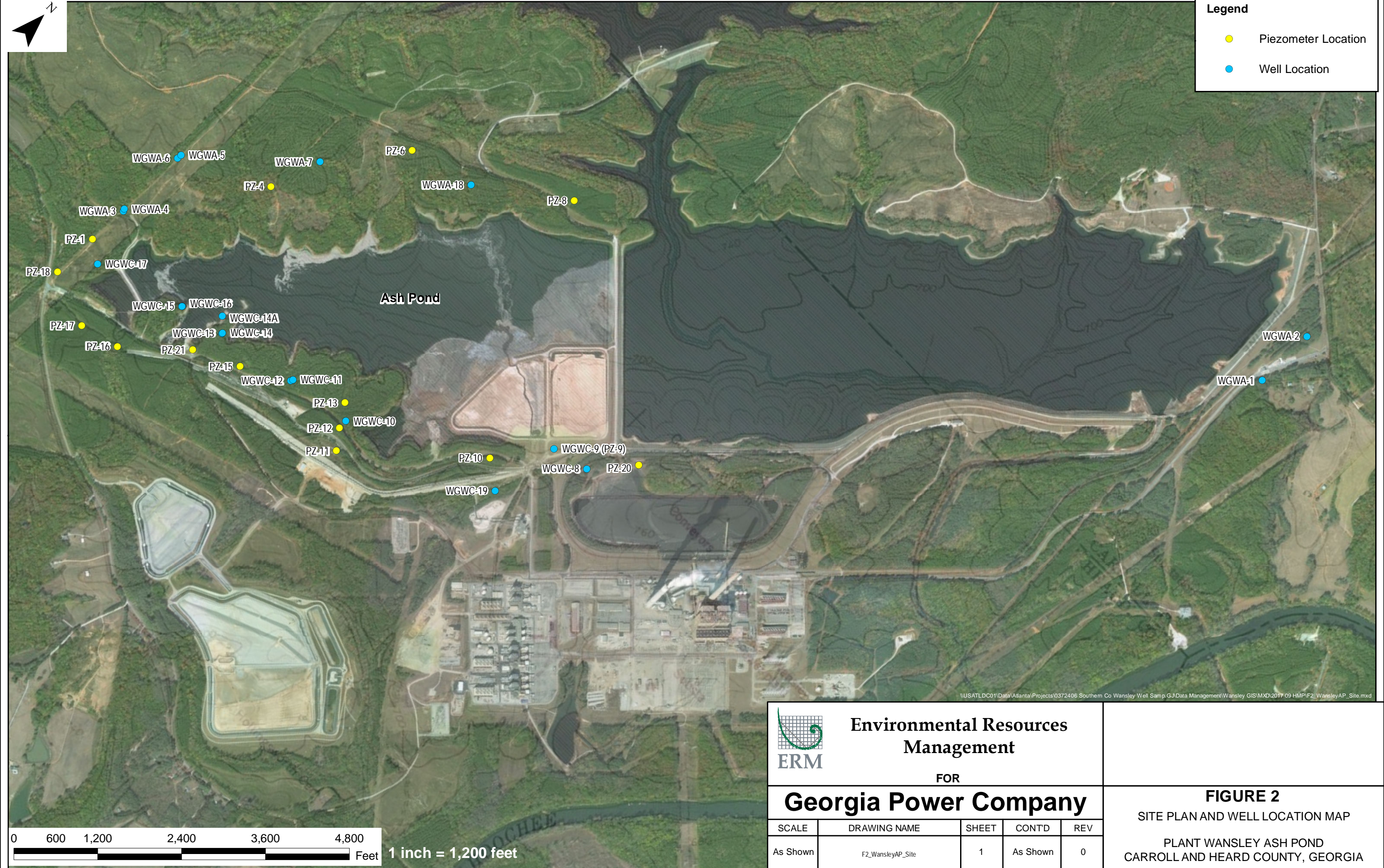
**FIGURE 1**  
SITE LOCATION MAP


PLANT WANSLEY ASH POND  
LOWELL, CARROLL / HEARD COUNTY, GEORGIA



**Legend**

- Piezometer Location
- Well Location



 <b>Environmental Resources Management</b> FOR <b>Georgia Power Company</b>		<b>FIGURE 2</b> SITE PLAN AND WELL LOCATION MAP  PLANT WANSLEY ASH POND CARROLL AND HEARD COUNTY, GEORGIA			
					SCALE
As Shown		F2_WansleyAP_Site	1	As Shown	0

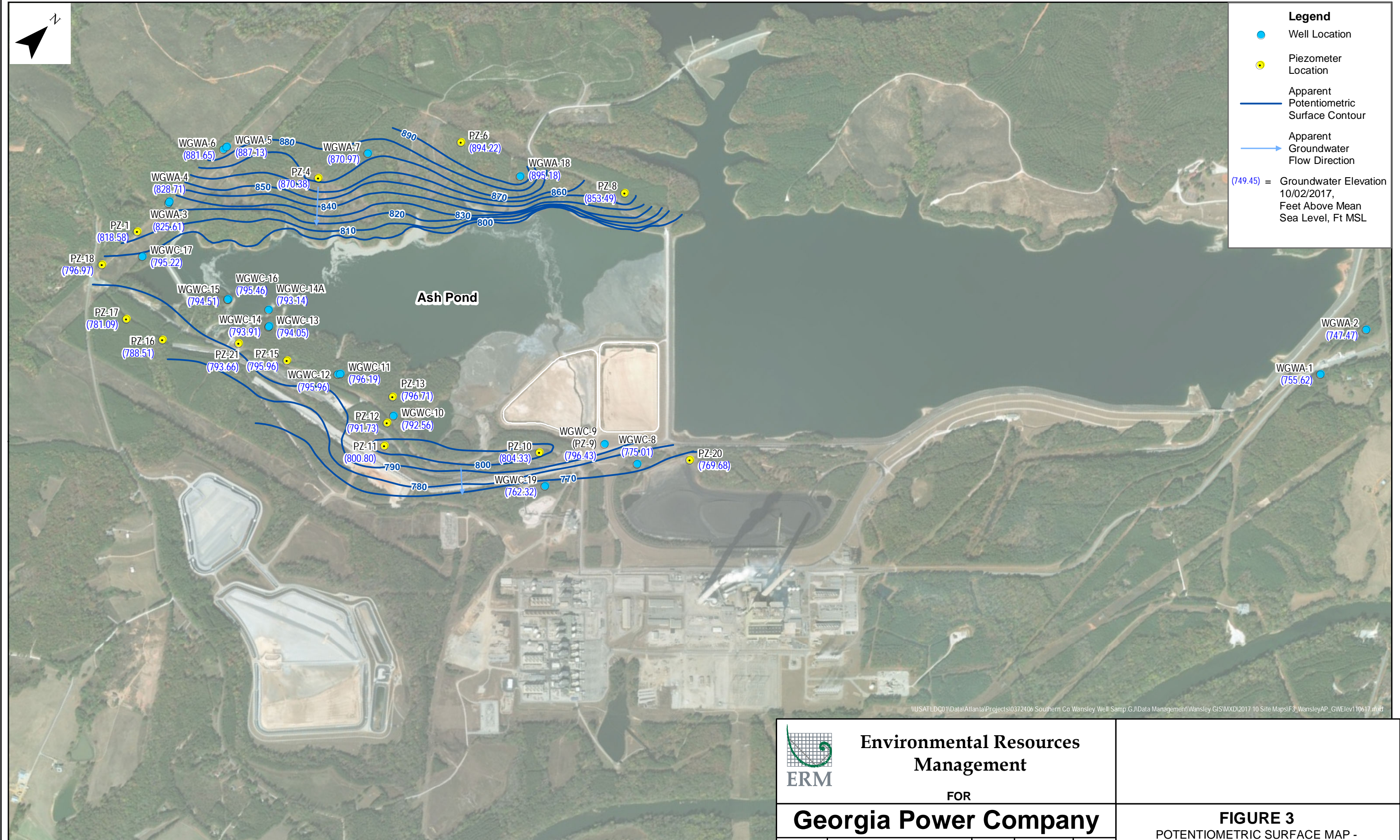
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**Legend**

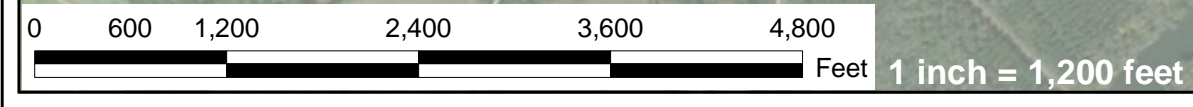
- Well Location
- Piezometer Location
- Apparent Potentiometric Surface Contour
- Apparent Groundwater Flow Direction

(749.45) = Groundwater Elevation 10/02/2017, Feet Above Mean Sea Level, Ft MSL



\\USATLDC01\Data\Atlanta\Projects\0372406 Southern Co Wansley Well Samp.G\JData Management\Wansley GIS\MXD\2017 10 Site Maps\F3\_WansleyAP\_GWElev110617.mxd

		<b>Environmental Resources Management</b>				
		<b>FOR</b>				
<b>Georgia Power Company</b>		<b>FIGURE 3</b>				
POTENTIOMETRIC SURFACE MAP - OCTOBER 2017		PLANT WANSLEY ASH POND				
LOWELL, CARROLL / HEARD COUNTY, GEORGIA		SCALE	DRAWING NAME	SHEET	CONTD	REV
As Shown		F3_WansleyAP_GWElev110617	1	As Shown	0	





**TABLE 1. MONITORING WELL NETWORK SUMMARY**

Well ID	Hydraulic Location	Installation Date mm/dd/yyyy	Latitude	Longitude	Top of Casing Elevation (ft MSL)	Total Depth (ft)	Top of Screen Elevation (ft MSL)	Bottom of Screen Elevation (ft MSL)	Screen Length (ft)
WGWA-1	Upgradient	10/21/2015	33.435287	-85.022235	782.86	129.86	663.0	653.0	10
WGWA-2	Upgradient	10/16/2015	33.437761	-85.022229	758.29	102.65	665.6	655.6	10
WGWA-3	Upgradient	12/15/2014	33.407027	-85.065319	829.00	19.00	820.0	810.0	10
WGWA-4	Upgradient	1/13/2015	33.408114	-85.065353	834.30	73.90	780.4	760.4	20
WGWA-5	Upgradient	12/23/2014	33.411187	-85.065290	902.10	23.60	888.5	878.5	10
WGWA-6	Upgradient	1/13/2015	33.411006	-85.065314	897.10	104.50	822.6	792.6	30
WGWA-7	Upgradient	12/22/2014	33.414906	-85.060497	897.40	39.60	867.8	857.8	10
WGWC-8	Downgradient	10/29/2015	33.413916	-85.041478	780.00	59.63	730.4	720.4	10
WGWC-9	Downgradient	12/4/2014	33.413688	-85.043755	812.08	61.08	761.0	751.0	10
WGWC-10	Downgradient	10/27/2015	33.408469	-85.050989	812.59	148.98	673.6	663.6	10
WGWC-11	Downgradient	10/21/2015	33.408139	-85.054106	824.00	49.50	784.5	774.5	10
WGWC-12	Downgradient	1/22/2017	33.408050	-85.054163	823.12	76.57	756.6	746.6	10
WGWC-13	Downgradient	11/4/2015	33.407427	-85.057988	810.04	95.55	734.5	714.5	20
WGWC-14A	Downgradient	1/31/2017	33.407904	-85.058550	811.09	43.08	778.0	768.0	10
WGWC-15	Downgradient	11/11/2015	33.407053	-85.060222	804.98	56.36	758.6	748.6	10
WGWC-16	Downgradient	11/11/2015	33.407061	-85.060192	804.49	34.78	779.7	769.7	10
WGWC-17	Downgradient	11/6/2015	33.405845	-85.064404	816.02	95.94	730.1	720.1	10
WGWA-18	Upgradient	12/16/2014	33.417798	-85.054843	878.10	39.60	848.5	838.5	10
WGWC-19	Downgradient	10/28/2015	33.410940	-85.043728	783.44	94.84	698.6	688.6	10
WGWC-14*	Downgradient	11/4/2015	33.407458	-85.057992	809.50	54.63	764.9	754.9	10

## Notes:

Wells were constructed of 2-inch inside diameter American Society for Testing and Materials (ASTM)

Schedule 40 PVC casing affixed to a pre-packed dual-wall slotted PVC screen.

ft = feet

MSL = mean sea level

BTOC = below top of casing

NA = Not applicable

\* Well no longer sampled as part of background monitoring due to well replacement.

**TABLE 2. GROUNDWATER SAMPLING EVENT SUMMARY**

Well ID	Hydraulic Location	Summary of Sampling Events																Status of Monitoring Well
		May 17-19, 2016	July 19-20, 2016	September 13-15, 2016	November 9-11, 2016	January 16-27, 2017	February 6-9, 2017	February 23, 2017	March 13-17, 2017	April 10-12, 2017	April 24-May 2, 2017	May 17, 2017	June 7, 2017	July 11, 2017	July 31 - August 25, 2017	September 9, 2017	October 2-16, 2017	
Purpose of Sampling Event		Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Detection	
WGWA-1	Upgradient	BG01	BG02	BG03	BG04	BG05	--	--	BG06	--	BG07	--	--	--	BG08	--	D01	Detection
WGWA-2	Upgradient	BG01	BG02	BG03	BG04	BG05	--	--	BG06	--	BG07	--	--	--	BG08	--	D01	Detection
WGWA-3	Upgradient	BG01	BG02	BG03	BG04	BG05	--	--	BG06	--	BG07	--	--	--	BG08	--	D01	Detection
WGWA-4	Upgradient	BG01	BG02	BG03	BG04	BG05	--	--	BG06	--	BG07	--	--	--	BG08	--	D01	Detection
WGWA-5	Upgradient	BG01	BG02	BG03	--	BG04	--	--	BG05	--	BG06	--	--	--	BG07	BG08	D01	Detection
WGWA-6	Upgradient	BG01	BG02	BG03	BG04	BG05	--	--	BG06	--	BG07	--	--	--	BG08	--	D01	Detection
WGWA-7	Upgradient	BG01	BG02	BG03	BG04	BG05	--	--	BG06	--	BG07	--	--	--	BG08	--	D01	Detection
WGWC-8	Downgradient	BG01	BG02	BG03	BG04	--	BG05	--	BG06	--	BG07	--	--	--	BG08	--	D01	Detection
WGWC-9	Downgradient	BG01	BG02	BG03	--	--	BG04	--	BG05	BG06	BG07	--	--	--	BG08	--	D01	Detection
WGWC-10	Downgradient	BG01	BG02	BG03	BG04	--	BG05	--	BG06	--	BG07	--	--	--	BG08	--	D01	Detection
WGWC-11	Downgradient	BG01	BG02	BG03	BG04	BG05	--	--	BG06	--	BG07	--	--	--	BG08	--	D01	Detection
WGWC-12	Downgradient	BG01	BG02	BG03	BG04	BG05	--	--	BG06	--	BG07	--	--	--	BG08	--	D01	Detection
WGWC-13	Downgradient	BG01	BG02	BG03	BG04	BG05	--	--	BG06	--	BG07	--	--	--	BG08	--	D01	Detection
WGWC-14*	Downgradient	BG01	BG02	BG03	BG04	BG05	--	--	--	--	--	--	--	--	--	--	--	--
WGWC-14A	Downgradient	--	--	--	--	--	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	--	--	D01	Detection
WGWC-15	Downgradient	BG01	BG02	BG03	BG04	BG05	--	--	BG06	--	BG07	--	--	--	BG08	--	D01	Detection
WGWC-16	Downgradient	BG01	BG02	BG03	BG04	BG05	--	--	BG06	--	BG07	--	--	--	BG08	--	D01	Detection
WGWC-17	Downgradient	BG01	BG02	BG03	BG04	BG05	--	--	BG06	--	BG07	--	--	--	BG08	--	D01	Detection
WGWA-18	Upgradient	BG01	BG02	BG03	BG04	BG05	--	--	BG06	--	BG07	--	--	--	BG08	--	D01	Detection
WGWC-19	Downgradient	--	--	--	BG01	--	BG02	--	BG03	BG04	BG05	--	BG06	BG07	BG08	--	D01	Detection

Notes:

BGXX = Background Event and Number

DXX = Detection Event Number

-- = Not sampled

\* Well no longer sampled as part of background monitoring due to well replacement.

**TABLE 3. SUMMARY OF GROUNDWATER ELEVATIONS**

Well ID	Top of Casing Elevation (ft MSL)	Groundwater Elevations (Feet MSL)									
		5/16/2016	7/18/2016	9/12/2016	11/8/2016	1/16/2017	3/13/2017	4/24/2017	6/6/2017	7/31/2017	10/2/2017
WGWA-1	782.90	757.60	753.85	752.45	751.20	753.17	756.82	757.45	757.32	757.86	755.62
WGWA-2	758.30	747.89	744.36	742.30	740.10	748.11	749.45	749.27	750.06	748.45	747.47
WGWA-3	829.00	826.41	824.55	823.86	823.20	824.27	825.40	827.00	826.34	826.02	825.61
WGWA-4	834.30	830.02	827.38	825.95	824.80	826.85	828.96	829.58	829.72	829.42	828.71
WGWA-5	902.10	890.02	885.89	883.75	882.70	885.08	887.85	889.28	888.54	889.01	887.13
WGWA-6	897.10	884.01	880.64	878.40	876.32	877.45	881.64	883.01	882.94	883.28	881.65
WGWA-7	897.40	874.90	870.10	866.95	864.34	864.26	868.65	870.72	871.15	873.20	870.97
WGWC-8	780.00	772.00	774.09	773.99	772.72	775.81	777.31	776.66	778.10	775.93	775.01
WGWC-9	812.08	797.43	799.49	799.63	797.72	798.38	797.89	798.52	799.01	791.77	796.43
WGWC-10	812.60	795.59	794.44	793.42	791.19	792.14	792.70	799.40	794.15	794.04	792.56
WGWC-11	824.00	801.51	797.31	795.08	792.49	792.40	795.57	796.86	797.27	798.10	796.19
WGWC-12	823.10	800.90	796.92	794.91	792.34	792.62	795.78	796.98	796.27	797.92	795.96
WGWC-13	810.00	794.86	795.41	795.10	792.15	796.50	795.81	796.65	797.56	796.17	794.05
WGWC-14A	811.09	NM	NM	NM	NM	NM	796.16	796.50	797.46	795.20	793.14
WGWC-15	804.50	795.20	796.16	795.74	793.38	796.35	794.98	796.28	797.14	796.41	794.51
WGWC-16	805.00	796.19	797.15	796.58	794.32	797.39	795.99	797.28	798.16	798.34	795.46
WGWC-17	816.00	796.04	796.41	795.95	793.73	796.56	795.79	796.90	797.51	796.87	795.22
WGWA-18	915.30	895.22	895.06	893.08	891.19	890.02	894.47	895.62	895.45	896.68	895.18
WGWC-19	783.40	NM	NM	NM	759.48	759.89	762.20	762.29	762.74	769.01	762.32
WGWC-14	809.50	793.98	794.68	794.84	791.52	796.60	795.82	796.56	797.64	795.62	793.91
PZ-1	856.78	819.70	818.82	818.56	818.37	818.09	818.05	818.42	818.62	818.78	818.58
PZ-4	889.09	870.63	870.42	869.82	NM	871.35	878.21	871.95	878.14	870.82	870.38
PZ-6	915.33	NM	892.62	890.14	NM	888.81	895.89	896.14	895.75	896.28	894.22
PZ-8	882.84	853.45	853.40	852.45	852.15	869.89	851.68	853.35	853.36	853.50	853.49
PZ-10	832.16	806.18	804.54	804.22	803.57	804.80	806.42	805.78	812.27	805.54	804.33
PZ-11	822.99	802.23	799.41	798.07	796.21	796.29	801.11	810.93	802.59	802.92	800.80
PZ-12	818.88	793.87	791.78	791.18	788.93	790.55	792.61	793.27	793.51	793.66	791.73
PZ-13	850.04	801.96	801.51	800.42	798.44	796.56	796.22	796.66	796.86	797.12	796.71
PZ-15	826.96	802.86	798.43	795.67	793.03	791.29	794.35	796.18	796.82	799.64	795.96
PZ-16	800.55	788.87	787.42	786.70	NM	788.39	789.58	789.17	790.00	788.93	788.51
PZ-17	831.21	794.55	792.76	791.66	NM	791.28	792.78	793.10	794.23	793.51	781.09
PZ-18	814.12	798.37	795.22	793.21	791.44	793.97	796.96	797.49	798.20	797.65	796.97
PZ-20	787.27	NM	NM	NM	NM	NM	770.88	771.12	771.17	771.89	769.68
PZ-21	814.71	NM	NM	NM	NM	NM	795.58	796.20	796.46	795.85	793.66

Notes:

ft = feet      NM = not measured

MSL = mean sea level

**TABLE 4. GROUNDWATER VELOCITY CALCULATIONS**

Well ID		$h_1$	$h_2$	K (ft/day)	$n_e$	dh	L (ft)	i (ft/ft)	Velocity (ft/day)
WGWC-16	PZ-16	795.46	788.51	0.67	0.25	6.95	1,080	0.01	0.03
PZ-10	WGWC-19	804.33	762.32			42.01	480	0.09	0.24
									Avg. (ft/day)
									0.14

Notes:

K = hydraulic conductivity

i = hydraulic gradient

$n_e$  = effective porosity

dh = difference between  $h_1$  and  $h_2$

$h_1$  and  $h_2$  = groundwater elevation at location 1 and 2

L = distance between locations 1 and 2

ft = feet

**TABLE 5. PLANT WANSLEY ASH POND  
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		WGWA-1	WGWA-1	WGWA-1	WGWA-1	WGWA-1	WGWA-1	WGWA-1	WGWA-1	
		05/17/2016	07/19/2016	09/13/2016	11/09/2016	01/17/2017	03/13/2017	04/24/2017	08/08/2017	
APPENDIX III	Boron	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Calcium	N/R	0.927	1.0	0.44	1.1	1.4	1.1	1.1	1.1
	Chloride	(250)	3.8	3.9	3.6	3.9	3.8	3.4	3.4	3.6
	Fluoride	4	ND (0.0131 J)	ND	ND	ND	ND	ND	ND	ND
	Sulfate	(250)	ND	ND	ND	ND	ND	ND	ND	ND
	TDS	(500)	ND	14	50	22	8.0	ND	10	ND
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND (0.0022 J)
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2	0.041	0.038	0.029	0.041	0.044	0.042	0.039	0.044
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	ND (0.0014 J)	ND (0.0015 J)	ND (0.0012 J)	ND (0.0010 J)	ND (0.0011 J)	ND (0.0010 J)	ND (0.0011 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND	ND	ND (0.0032 J)	ND	ND	ND	ND (0.0032 J)
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND (0.0017 J)
	Radium	5	0.0525 U	7.25	0.592 U	0.221 U	0.295 U	-0.130 U	0.360 U	0.382
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	0.0013
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.

**TABLE 5. PLANT WANSLEY ASH POND  
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		WGWA-2	WGWA-2	WGWA-2	WGWA-2	WGWA-2	WGWA-2	WGWA-2	WGWA-2	
		05/17/2016	07/19/2016	09/13/2016	11/09/2016	01/17/2017	03/13/2017	04/24/2017	08/08/2017	
APPENDIX III	Boron	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Calcium	N/R	12.2	13	13	19	28	14	12	18
	Chloride	(250)	2.5	2.6	2.4	2.3	2.3	2.2	2.2	2.3
	Fluoride	4	ND (0.0538 J)	ND	ND	ND (0.085 J)	ND	ND	ND	ND
	Sulfate	(250)	1.14	1.4	1.1	1.1	2.1	ND (0.97 J)	ND (0.75 J)	1.1
	TDS	(500)	100	84	70	110	120	58	94	62
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND (0.00099 J)	ND	ND	ND
	Barium	2	0.0308	0.022	0.021	0.025	0.017	0.019	0.019	0.022
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	ND (0.00086 J)	ND (0.00095 J)	ND (0.0011 J)	ND	ND (0.00087 J)	ND (0.0014 J)	ND (0.0012 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	0.0050	0.0075	0.0078	0.0090	0.0069	ND (0.0049 J)	0.0075
	Mercury	0.002	ND	ND (0.000081 J)	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.130 U	0.121 U	0.372 U	0.217 U	0.595	- 0.147 U	0.367	0.402
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.

**TABLE 5. PLANT WANSLEY ASH POND  
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		WGWA-3	WGWA-3	WGWA-3	WGWA-3	WGWA-3	WGWA-3	WGWA-3	WGWA-3	
		05/18/2016	07/20/2016	09/13/2016	11/10/2016	01/18/2017	03/14/2017	04/25/2017	08/08/2017	
APPENDIX III	Boron	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Calcium	N/R	2.1	1.7	1.3	1.6	1.7	1.8	2.0	2.0
	Chloride	(250)	1.92	1.8	1.7	1.6	1.7	1.6	1.6	1.7
	Fluoride	4	ND (0.029 J)	ND	ND	ND	ND	ND	ND	ND
	Sulfate	(250)	ND (0.821 J)	ND (0.82 J)	ND (0.81 J)	ND (0.73 J)	ND (0.99 J)	ND (0.83 J)	ND (0.70 J)	ND (0.82 J)
	TDS	(500)	29	ND	12	30	22	22	22	ND (4.0 J)
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND (0.00086 J)	ND	ND	ND
	Barium	2	0.0174	0.012	0.013	0.013	0.014	0.014	0.015	0.015
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND (0.000077 J)	ND	ND (0.00015 J)	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND (0.00087 J)	ND (0.00098 J)	ND
	Radium	5	0.025 U	0.398 U	0.215 U	0.421	0.434 U	0.167 U	0.224 U	0.127 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND (0.00026 J)	ND (0.00035 J)	ND
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.

**TABLE 5. PLANT WANSLEY ASH POND  
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		WGWA-4	WGWA-4	WGWA-4	WGWA-4	WGWA-4	WGWA-4	WGWA-4	WGWA-4	
		05/18/2016	07/20/2016	09/13/2016	11/10/2016	01/18/2017	03/14/2017	04/25/2017	08/09/2017	
APPENDIX III	Boron	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Calcium	N/R	17.9	15	16	15	17	17	17	15
	Chloride	(250)	1.45	1.4	1.4	1.3	1.3	1.2	1.2	1.2
	Fluoride	4	ND (0.164 J)	ND (0.17 J)	ND (0.15 J)	ND (0.12 J)	ND (0.15 J)	ND (0.13 J)	ND (0.12 J)	ND (0.14 J)
	Sulfate	(250)	5.32	6.5	5.6	5.4	5.1	4.6	6.6	7.3
	TDS	(500)	101	86	28	110	98	110	86	92
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND (0.00078 J)	ND (0.0012 J)	ND	ND	ND
	Barium	2	ND (0.00723 J)	0.0051	0.0058	0.0063	0.0059	0.0058	0.0056	0.0056
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.0041 J)	ND (0.0042 J)	ND (0.0048 J)	ND (0.0033 J)	ND (0.0033 J)	ND (0.0037 J)	ND (0.0042 J)
	Mercury	0.002	ND	ND (0.000081 J)	ND	ND (0.00016 J)	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	1.04	0.812	0.958	1.13	1.76	0.788	1.13	1.31
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.



**TABLE 5. PLANT WANSLEY ASH POND  
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		WGWA-5	WGWA-5	WGWA-5	WGWA-5	WGWA-5	WGWA-5	WGWA-5	WGWA-5	
		05/18/2016	07/19/2016	09/14/2016	01/19/2017	03/14/2017	04/25/2017	08/09/2017	08/25/2017	
APPENDIX III	Boron	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Calcium	N/R	1.7	1.5	52	13	1.6	1.5	1.3	1.5
	Chloride	(250)	2.14	2.4	2.1	1.8	2.0	1.8	1.9	2.0
	Fluoride	4	ND (0.014 J)	ND	ND (0.095 J)	ND	ND	ND	ND	ND
	Sulfate	(250)	ND (0.955 J)	ND (0.76 J)	3.4	21	1.4	ND (0.89 J)	ND (0.75 J)	ND
	TDS	(500)	33	ND	150	34	32	22	20	ND
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND (0.00069 J)	ND	ND	ND	ND	ND
	Barium	2	0.0198	0.015	0.062	0.034	0.018	0.018	0.016	0.015
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	0.0031	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	ND (0.0014 J)	0.013	0.064	0.0066	0.0026	0.0025	0.0025
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND (0.000085 J)	ND	ND	ND	ND	ND	ND (0.000095 J)
	Molybdenum	N/R	ND	ND	0.016	ND	ND	ND	ND	ND
	Radium	5	0.325 U	0.433 U	0.216 U	0.119 U	0.105 U	0.385 U	2.02	0.275 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND	ND (0.000090 J)	ND	ND	ND	ND	ND	

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.

**TABLE 5. PLANT WANSLEY ASH POND  
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		WGWA-6	WGWA-6	WGWA-6	WGWA-6	WGWA-6	WGWA-6	WGWA-6	WGWA-6	
		05/18/2016	07/19/2016	09/13/2016	11/09/2016	01/18/2017	03/14/2017	04/25/2017	08/08/2017	
APPENDIX III	Boron	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Calcium	N/R	27	23	25	25	26	20	28	26
	Chloride	(250)	1.58	1.6	1.4	1.5	1.5	2.5	1.3	1.4
	Fluoride	4	ND (0.106 J)	ND (0.11 J)	ND (0.11 J)	ND (0.10 J)	ND (0.11 J)	ND	ND	ND (0.099 J)
	Sulfate	(250)	8.88	9.0	8.5	8.2	9.4	2.0	8.2	8.5
	TDS	(500)	113	92	100	130	120	110	100	90
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND (0.00080 J)	ND	ND	ND
	Barium	2	ND (0.00518 J)	0.0049	0.0060	0.0066	0.0070	0.014	0.0062	0.0065
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	ND	ND	ND	ND	ND (0.0018 J)	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.0043 J)	ND (0.0045 J)	ND (0.0036 J)	ND (0.0046 J)	ND (0.0038 J)	ND	ND (0.0043 J)
	Mercury	0.002	ND	ND (0.000084 J)	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	8.00	7.69	6.98	8.78	10.4	0.589	8.22	7.21
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.

**TABLE 5. PLANT WANSLEY ASH POND  
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		WGWA-7	WGWA-7	WGWA-7	WGWA-7	WGWA-7	WGWA-7	WGWA-7	WGWA-7	WGWA-7
		05/18/2016	07/19/2016	09/13/2016	11/10/2016	01/18/2017	03/14/2017	04/25/2017	08/08/2017	
APPENDIX III	Boron	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Calcium	N/R	1.36	0.88	0.93	6.1	10	1.3	1.9	4.8
	Chloride	(250)	2.06	2.1	2.0	1.8	1.8	1.8	1.8	1.9
	Fluoride	4	ND (0.018 J)	ND	ND	ND	ND	ND	ND	ND
	Sulfate	(250)	ND (0.368 J)	ND	ND	ND	1.4	ND	ND	ND
	TDS	(500)	31	ND	ND	44	50	26	10	ND
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND (0.0010 J)	ND	ND	ND
	Barium	2	0.0114	0.012	0.011	0.016	0.013	0.010	0.012	0.012
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	ND	ND	ND (0.00055 J)	ND (0.00097 J)	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND (0.000072 J)	ND	ND (0.000087 J)	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND (0.0010 J)	ND (0.0014 J)	ND	ND
	Radium	5	0.268 U	0.369 U	0.527 U	0.871	0.213 U	0.0192 U	0.0872 U	0.219 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.

**TABLE 5. PLANT WANSLEY ASH POND  
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		WGWA-18	WGWA-18	WGWA-18	WGWA-18	WGWA-18	WGWA-18	WGWA-18	WGWA-18	
		05/17/2016	07/19/2016	09/13/2016	11/09/2016	01/19/2017	03/14/2017	04/25/2017	08/08/2017	
APPENDIX III	Boron	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Calcium	N/R	23.7	23	23	6.7	8.5	13	23	24
	Chloride	(250)	6.05	4.0	3.1	2.3	2.0	1.9	1.9	2.0
	Fluoride	4	ND (0.284 J)	0.21	ND (0.15 J)	ND	ND (0.087 J)	ND	ND	ND (0.087 J)
	Sulfate	(250)	19.9	14	11	6.3	7.4	10	10	12
	TDS	(500)	112	80	120	76	36	70	70	72
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND (0.00061 J)	ND (0.00074 J)	ND	ND (0.00079 J)	0.0014	ND (0.00062 J)	ND
	Barium	2	0.0221	0.018	0.021	0.011	0.012	0.017	0.017	0.021
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	ND (0.0019 J)	0.0032	0.0039	0.0032	0.0045	ND (0.0020 J)	0.0031
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND (0.000082 J)	ND	ND	ND	ND (0.000071 J)	ND	ND
	Molybdenum	N/R	ND (0.00367 J)	ND (0.0020 J)	ND (0.0014 J)	ND	ND	ND (0.0072 J)	ND (0.0036 J)	ND
	Radium	5	0.184 U	0.270 U	0.194 U	0.219 U	0.0745 U	0.194 U	0.109 U	0.0842 U
	Selenium	0.05	ND	ND	ND	ND	ND	0.0028	0.0018	ND
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
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7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.

**TABLE 5. PLANT WANSLEY ASH POND  
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		WGWC-8	WGWC-8	WGWC-8	WGWC-8	WGWC-8	WGWC-8	WGWC-8	WGWC-8	
		05/19/2016	07/20/2016	09/15/2016	11/14/2016	02/06/2017	03/15/2017	04/26/2017	08/10/2017	
APPENDIX III	Boron	N/R	1.42	1.4	1.2	1.3	1.8	1.7	2.0	1.8
	Calcium	N/R	31.4	28	27	32	41	38	39	53
	Chloride	(250)	17.5	19	19	25	33	38	42	48
	Fluoride	4	0.304	0.27	0.24	0.20	0.27	0.25	0.31	0.37
	Sulfate	(250)	146	150	140	160	180	170	180	180
	TDS	(500)	311	290	270	320	330	370	380	380
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND (0.00055 J)	ND	ND	ND	ND	ND	ND
	Barium	2	ND (0.0026 J)	ND (0.0017 J)	0.0039	ND (0.00085 J)	ND (0.0011 J)	ND (0.0013 J)	ND (0.00098 J)	0.0025
	Beryllium	0.004	ND (0.00102 J)	ND (0.0014 J)	ND (0.00093 J)	ND (0.0014 J)	ND (0.0017 J)	ND (0.0016 J)	ND (0.0017 J)	ND (0.0017 J)
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.0215 J)	0.026	0.057	0.017	0.012	0.014	0.0091	0.013
	Mercury	0.002	ND	ND	ND (0.00011 J)	ND	ND (0.000078 J)	ND (0.00013 J)	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.711 U	1.14	1.26	0.749	1.05	1.32	1.07	1.88
	Selenium	0.05	ND (0.00518 J)	0.0038	0.0034	0.0033	0.0033	0.0030	0.0032	0.0031
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.

**TABLE 5. PLANT WANSLEY ASH POND  
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		WGWC-9	WGWC-9	WGWC-9	WGWC-9	WGWC-9	WGWC-9	WGWC-9	WGWC-9	
		05/19/2016	07/20/2016	09/14/2016	02/09/2017	03/15/2017	04/11/2017	04/26/2017	08/10/2017	
APPENDIX III	Boron	N/R	0.314	0.25	0.30	0.61	0.42	0.37	0.38	0.29
	Calcium	N/R	8.53	8.2	8.8	10	8.6	8.6	7.1	7.5
	Chloride	(250)	1.46	1.5	1.4	1.5	1.3	1.2	1.2	1.3
	Fluoride	4	1.58	2.0	1.8	1.3	1.3	1.4	1.5	1.6
	Sulfate	(250)	35.9	37	39	60	44	36	37	38
	TDS	(500)	134	120	140	180	160	120	140	130
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND (0.0011 J)	ND	ND	ND
	Arsenic	0.01	ND	ND (0.00078 J)	ND	0.0017	ND (0.00047 J)	ND	ND	ND
	Barium	2	ND	ND (0.0014 J)	ND (0.00092 J)	ND (0.0015 J)	ND (0.00054 J)	ND (0.00070 J)	ND	ND (0.00053 J)
	Beryllium	0.004	ND	ND	ND	ND (0.00041 J)	ND	ND	ND	ND (0.00034 J)
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	ND	ND	ND (0.00073 J)	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.0335 J)	0.024	0.039	0.040	0.035	0.034	0.029	0.038
	Mercury	0.002	ND	ND	ND	ND	ND (0.00013 J)	ND	ND	ND
	Molybdenum	N/R	ND (0.00762 J)	ND (0.0084 J)	ND (0.0071 J)	0.018	ND (0.0057 J)	ND (0.0047 J)	ND (0.0040 J)	ND (0.0046 J)
	Radium	5	0.209 U	-0.084 U	0.420 U	0.393	0.271 U	0.488 U	0.140 U	0.379
	Selenium	0.05	ND (0.00228 J)	0.0016	0.0024	0.0023	0.0031	0.0023	0.0019	0.0021
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.

**TABLE 5. PLANT WANSLEY ASH POND  
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		WGWC-10	WGWC-10	WGWC-10	WGWC-10	WGWC-10	WGWC-10	WGWC-10	WGWC-10	
		05/18/2016	07/20/2016	09/14/2016	11/11/2016	02/06/2017	03/15/2017	04/26/2017	08/10/2017	
APPENDIX III	Boron	N/R	ND	ND	ND	ND	ND	ND (0.032 J)	ND	ND
	Calcium	N/R	7.17	7.0	7.7	8.2	9.1	9.0	8.1	8.1
	Chloride	(250)	1.45	1.6	1.5	1.5	1.4	1.4	1.3	1.4
	Fluoride	4	ND (0.206 J)	0.23	ND (0.17 J)	ND (0.14 J)	ND (0.15 J)	ND (0.16 J)	ND (0.17 J)	0.20
	Sulfate	(250)	2.84	2.8	2.8	2.6	2.7	2.7	2.5	2.2
	TDS	(500)	70	42	40	72	24	78	48	38
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2	0.0391	0.028	0.035	0.042	0.041	0.040	0.039	0.038
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND (0.0012 J)	ND	ND (0.0015 J)	ND (0.0011 J)	ND (0.0015 J)	ND (0.0013 J)	ND (0.0016 J)
	Cobalt	N/R	ND (0.00201 J)	ND (0.00066 J)	ND (0.00095 J)	ND (0.0010 J)	ND (0.00072 J)	ND (0.00062 J)	ND (0.0014 J)	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.032 J)	0.021	0.020	0.017	0.016	0.014	0.011	0.011
	Mercury	0.002	ND	ND (0.000082 J)	ND	ND (0.000085 J)	ND (0.000083 J)	ND (0.00013 J)	ND	ND
	Molybdenum	N/R	ND	ND	ND (0.00091 J)	ND	ND	ND	ND	ND (0.00093 J)
	Radium	5	0.182 U	-0.135 U	0.311 U	0.542	0.104 U	0.523	0.0690 U	0.189 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND (0.00031 J)
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
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7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
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**TABLE 5. PLANT WANSLEY ASH POND  
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		WGWC-11	WGWC-11	WGWC-11	WGWC-11	WGWC-11	WGWC-11	WGWC-11	WGWC-11	
		05/19/2016	07/20/2016	09/14/2016	11/11/2016	01/27/2017	03/15/2017	04/26/2017	08/10/2017	
APPENDIX III	Boron	N/R	ND	ND	ND	ND	ND (0.021 J)	0.058	ND	ND
	Calcium	N/R	1.95	1.5	1.8	1.7	3.5	3.8	4.0	3.5
	Chloride	(250)	3.21	3.4	3.1	3.2	3.4	3.1	3.1	3.1
	Fluoride	4	ND (0.039 J)	ND	ND	ND	ND	ND	ND	ND
	Sulfate	(250)	1.83	1.6	1.5	1.4	2.5	2.5	2.2	2.3
	TDS	(500)	39	ND	24	42	18	54	42	30
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND (0.00047 J)	ND	ND	ND
	Barium	2	0.031	0.029	0.031	0.034	0.042	0.032	0.030	0.030
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND (0.0011 J)	ND
	Cobalt	N/R	ND	0.0025	ND	ND (0.00052 J)	ND (0.00049 J)	ND (0.00064 J)	ND (0.0010 J)	ND (0.0011 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.002	ND	ND (0.000082 J)	ND	ND (0.00011 J)	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND (0.0011 J)
	Radium	5	0.431 U	-0.263 U	0.130 U	0.0257 U	0.898	0.121 U	0.0309 U	0.326 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND (0.00049 J)
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.



**TABLE 5. PLANT WANSLEY ASH POND  
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		WGWC-12	WGWC-12	WGWC-12	WGWC-12	WGWC-12	WGWC-12	WGWC-12	WGWC-12	
		05/19/2016	07/20/2016	09/14/2016	11/11/2016	01/27/2017	03/15/2017	04/26/2017	08/10/2017	
APPENDIX III	Boron	N/R	ND	ND	ND	ND	ND (0.047 J)	ND (0.024 J)	ND	ND
	Calcium	N/R	15.8	14	16	15	16	16	3.0	15
	Chloride	(250)	3.8	3.8	3.7	3.5	3.1	3.2	3.2	3.4
	Fluoride	4	ND (0.12 J)	ND (0.11 J)	ND (0.095 J)	ND	ND	ND	ND	ND (0.11 J)
	Sulfate	(250)	15.8	16	16	14	15	17	15	16
	TDS	(500)	101	76	96	100	50	120	100	96
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND (0.0023 J)
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND (0.00048 J)
	Barium	2	0.0214	0.019	0.020	0.022	0.023	0.024	0.0040	0.017
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	ND (0.0013 J)	ND (0.00098 J)	ND (0.0017 J)	ND (0.0022 J)	ND (0.0016 J)	ND (0.00026 J)	ND (0.00049 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	0.0057	0.0077	0.0070	0.0074	0.0077	0.0011	0.0064
	Mercury	0.002	ND	ND (0.00011 J)	ND	ND (0.000079 J)	ND	ND (0.00018 J)	ND	ND
	Molybdenum	N/R	ND	ND (0.00095 J)	ND (0.00090 J)	ND	ND	ND	ND	ND (0.0046 J)
	Radium	5	0.0698 U	-0.0646 U	0.199 U	0.467	0.836	0.254 U	0.267 U	0.912
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	0.0021
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.

**TABLE 5. PLANT WANSLEY ASH POND  
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		WGWC-13	WGWC-13	WGWC-13	WGWC-13	WGWC-13	WGWC-13	WGWC-13	WGWC-13	WGWC-13
		05/19/2016	07/20/2016	09/14/2016	11/10/2016	01/27/2017	03/15/2017	04/26/2017	08/09/2017	
APPENDIX III	Boron	N/R	ND (0.0252 J)	ND	ND	ND	ND (0.033 J)	ND	ND	ND
	Calcium	N/R	11.4	7.1	7.4	6.4	6.2	6.7	6.5	7.0
	Chloride	(250)	2.26	1.9	1.6	1.4	1.4	1.4	1.3	1.4
	Fluoride	4	0.384	0.34	0.31	0.26	0.28	0.30	0.33	0.32
	Sulfate	(250)	19.2	11	8.6	5.7	6.8	11	8.1	8.1
	TDS	(500)	127	88	92	100	80	100	92	120
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND (0.00066 J)	ND	ND	ND
	Barium	2	0.055	0.039	0.040	0.040	0.042	0.058	0.054	0.055
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND (0.00040 J)
	Lead	0.015	ND	ND	ND (0.00055 J)	ND (0.00047 J)	ND	ND	ND	ND
	Lithium	N/R	ND	ND	ND	ND (0.0038 J)	ND	ND	ND	ND
	Mercury	0.002	ND	ND (0.000081 J)	ND	ND (0.000083 J)	ND	ND	ND	ND
	Molybdenum	N/R	ND (0.00491 J)	ND (0.0025 J)	ND (0.0028 J)	ND (0.0016 J)	ND (0.0023 J)	ND (0.0022 J)	ND (0.0019 J)	ND (0.0028 J)
	Radium	5	0.219 U	0.404 U	0.692	1.00	0.668	0.847	0.408 U	0.816
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.

**TABLE 5. PLANT WANSLEY ASH POND  
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID							
		WGWC-14	WGWC-14	WGWC-14	WGWC-14	WGWC-14	WGWC-14	WGWC-14	
		05/19/2016	07/20/2016	09/14/2016	11/10/2016	01/27/2017			
APPENDIX III	Boron	N/R	0.153	0.067	ND (0.041 J)	ND (0.029 J)	0.21		
	Calcium	N/R	10.5	6.6	5.8	4.7	6.8		
	Chloride	(250)	9.44	5.8	4.1	3.2	8.0		
	Fluoride	4	ND (0.0520 J)	ND	ND	ND	ND		
	Sulfate	(250)	12.4	7.2	4.3	2.6	10		
	TDS	(500)	112	50	32	92	68		
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND		
	Arsenic	0.01	ND	ND	ND	ND	ND		
	Barium	2	0.222	0.17	0.15	0.15	0.21		
	Beryllium	0.004	ND	ND	ND	ND	ND		
	Cadmium	0.005	ND	ND	ND	ND	ND		
	Chromium	0.1	ND	ND	ND	ND	ND		
	Cobalt	N/R	ND	ND	ND	ND	ND		
	Lead	0.015	ND	ND	ND	ND	ND (0.00040 J)		
	Lithium	N/R	ND	ND	ND	ND	ND		
	Mercury	0.002	ND	ND (0.000079 J)	ND	ND	ND		
	Molybdenum	N/R	ND	ND	ND	ND	ND		
	Radium	5	1.08	1.21	0.772	1.09	1.43		
	Selenium	0.05	ND	ND	ND	ND	ND		
Thallium	0.002	ND	ND	ND	ND	ND			

See Note 10.

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
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3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.
10. Well no longer sampled as part of background monitoring due to well replacement

**TABLE 5. PLANT WANSLEY ASH POND  
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		WGWC-14A	WGWC-14A	WGWC-14A	WGWC-14A	WGWC-14A	WGWC-14A	WGWC-14A	WGWC-14A	WGWC-14A
		02/08/2017	02/23/2017	03/17/2017	04/11/2017	04/26/2017	05/17/2017	06/07/2017	07/11/2017	
APPENDIX III	Boron	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Calcium	N/R	3.2	4.1	2.4	4.1	2.5	5.2	5.2	2.3
	Chloride	(250)	2.5	4.3	4.8	3.8	4.8	3.9	3.2	4.1
	Fluoride	4	ND	ND	ND	ND	ND	ND	ND	ND
	Sulfate	(250)	4.3	16	22	13	20	12	8.1	17
	TDS	(500)	54	78	56	76	76	68	72	68
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND (0.00060 J)	0.0032	0.0019	0.0014	0.0021	ND (0.00095 J)
	Barium	2	0.037	0.051	0.046	0.055	0.042	0.052	0.060	0.038
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	0.0051	0.014	0.013	0.016	0.010	0.011	0.010	0.0085
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.0039 J)	ND	ND	ND	ND	ND (0.0033 J)	ND	ND
	Mercury	0.002	ND	ND	ND (0.00013 J)	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND (0.0010 J)	ND
	Radium	5	0.958	0.771	1.70	0.901	0.434	0.632	1.06	0.716
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND (0.00011 J)	ND (0.00012 J)	ND	ND	ND	ND	ND	ND	

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.

**TABLE 5. PLANT WANSLEY ASH POND  
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		WGWC-15	WGWC-15	WGWC-15	WGWC-15	WGWC-15	WGWC-15	WGWC-15	WGWC-15	
		05/18/2016	07/19/2016	09/14/2016	11/10/2016	01/24/2017	03/14/2017	04/25/2017	08/09/2017	
APPENDIX III	Boron	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Calcium	N/R	32.5	30	37	29	28	29	32	30
	Chloride	(250)	4.59	5.9	7.9	6.5	4.1	4.4	4.0	3.6
	Fluoride	4	0.779	0.97	0.89	0.88	0.92	0.77	0.95	0.91
	Sulfate	(250)	50.7	62	79	61	34	43	39	35
	TDS	(500)	190	180	230	210	140	220	180	180
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.00345 J)	0.0031	0.0024	0.0023	0.0019	0.0016	0.0019	0.0017
	Barium	2	0.0206	0.019	0.020	0.020	0.017	0.018	0.018	0.020
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.0036 J)	ND	0.0064	0.0075	0.0057	0.0059	0.0068
	Mercury	0.002	ND	ND (0.000093 J)	ND	ND (0.000085 J)	ND	ND (0.000071 J)	ND	ND
	Molybdenum	N/R	0.0153	ND (0.0093 J)	ND (0.012 J)	ND (0.0065 J)	ND (0.0049 J)	ND (0.0034 J)	ND (0.0040 J)	ND (0.0042 J)
	Radium	5	0.569	0.290 U	0.412 U	0.709	0.779	0.247 U	0.515	1.70
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

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3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
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**TABLE 5. PLANT WANSLEY ASH POND  
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		WGWC-16	WGWC-16	WGWC-16	WGWC-16	WGWC-16	WGWC-16	WGWC-16	WGWC-16	
		05/18/2016	07/19/2016	09/14/2016	11/10/2016	01/24/2017	03/15/2017	04/25/2017	08/09/2017	
APPENDIX III	Boron	N/R	4.48	4.7	5.8	6.7	6.3	5.9	6.2	6.3
	Calcium	N/R	168	190	230	240	280	260	300	350
	Chloride	(250)	217	250	260	290	310	330	330	330
	Fluoride	4	ND (0.1 J)	ND (0.14 J)	ND (0.18 J)	ND (0.11 J)	ND (0.15 J)	ND (0.10 J)	ND (0.13 J)	ND (0.18 J)
	Sulfate	(250)	388	460	500	530	600	610	620	780
	TDS	(500)	1080	1200	1300	1400	1300	1500	1700	1900
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND (0.00090 J)	0.0014	0.0021	0.0015	0.0014	0.0014	0.0013
	Barium	2	0.0715	0.069	0.066	0.069	0.068	0.065	0.057	0.069
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND (0.000362 J)	ND	ND (0.00037 J)	ND	ND (0.00055 J)	ND (0.00067 J)	ND (0.00058 J)	ND (0.00054 J)
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND (0.0069 J)	0.012	0.013	0.016	0.015	0.014	0.014	0.016
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	0.0091	0.012	0.013	0.011	0.010	0.0081	0.013
	Mercury	0.002	ND	ND	ND	ND (0.00012 J)	ND (0.000070 J)	ND	ND (0.00019 J)	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	1.03	2.39	3.05	2.87	2.68	1.64	0.878	2.50
	Selenium	0.05	ND (0.00735 J)	0.0075	0.0091	0.0056	0.012	0.012	0.013	0.016
Thallium	0.002	ND	ND (0.000085 J)	ND (0.00017 J)	ND (0.00017 J)	ND (0.00023 J)	ND (0.00021 J)	ND (0.00024 J)	ND (0.00020 J)	

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
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3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.

**TABLE 5. PLANT WANSLEY ASH POND  
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		WGWC-17	WGWC-17	WGWC-17	WGWC-17	WGWC-17	WGWC-17	WGWC-17	WGWC-17	
		05/18/2016	07/20/2016	09/14/2016	11/10/2016	01/20/2017	03/14/2017	04/25/2017	08/09/2017	
APPENDIX III	Boron	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Calcium	N/R	8.24	11	12	11	10	8.8	12	11
	Chloride	(250)	2.72	1.9	1.6	1.6	1.5	1.5	1.8	1.4
	Fluoride	4	ND (0.121 J)	ND (0.16 J)	ND (0.19 J)	ND (0.15 J)	ND (0.18 J)	ND (0.11 J)	ND (0.13 J)	ND (0.19 J)
	Sulfate	(250)	32.1	9.7	6.6	5.2	5.3	9.6	20	6.5
	TDS	(500)	107	78	82	98	82	120	120	92
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND (0.00058 J)	ND	ND (0.00082 J)	ND	ND	ND (0.00095 J)	ND
	Barium	2	0.0219	0.019	0.017	0.020	0.018	0.019	0.023	0.017
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND (0.00245 J)	ND (0.0018 J)	ND (0.0014 J)	ND (0.0016 J)	ND (0.0014 J)	ND (0.0023 J)	ND (0.0023 J)	ND (0.0011 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.0042 J)	0.0058	0.0066	ND (0.0044 J)	ND (0.0048 J)	ND (0.0049 J)	0.0067
	Mercury	0.002	ND	ND (0.000074 J)	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND (0.00526 J)	ND (0.0066 J)	ND (0.0081 J)	ND (0.0076 J)	ND (0.0094 J)	ND (0.0044 J)	ND (0.0074 J)	ND (0.0066 J)
	Radium	5	0.116 U	0.247 U	0.594	0.431	1.35	-0.107 U	0.228 U	-0.0246 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
5. ND (value J) indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed (value J) is qualified by the laboratory as an estimated number.
6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.

**TABLE 5. PLANT WANSLEY ASH POND  
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		WGWC-19	WGWC-19	WGWC-19	WGWC-19	WGWC-19	WGWC-19	WGWC-19	WGWC-19	WGWC-19
		11/11/2016	02/06/2017	03/15/2017	04/11/2017	04/26/2017	06/07/2017	07/11/2017	08/10/2017	
APPENDIX III	Boron	N/R	ND	ND	ND (0.034 J)	ND	ND	ND	ND	ND
	Calcium	N/R	12	11	10	11	8.4	9.0	9.5	8.8
	Chloride	(250)	2.6	2.6	2.4	2.3	2.3	2.5	2.3	2.5
	Fluoride	4	0.32	0.45	0.37	0.37	0.40	0.35	0.39	0.42
	Sulfate	(250)	3.4	3.7	3.6	3.2	3.3	3.8	3.3	3.7
	TDS	(500)	98	36	120	68	76	74	70	66
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND
	Barium	2	ND (0.0022 J)	ND (0.0018 J)	ND (0.0015 J)	ND (0.0014 J)	ND (0.0014 J)	ND (0.0014 J)	ND (0.0013 J)	ND (0.0012 J)
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	ND	ND
	Cobalt	N/R	ND	ND (0.00058 J)	ND (0.00045 J)	ND	ND	ND	ND	ND (0.00049 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	0.045	0.050	0.052	0.048	0.044	0.047	0.045	0.056
	Mercury	0.002	ND (0.000076 J)	ND (0.00012 J)	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND (0.0010 J)	ND	ND	ND	ND (0.0015 J)	ND	ND (0.0016 J)
	Radium	5	-0.110 U	0.471	0.255 U	0.190 U	0.220 U	0.126 U	0.511	0.882
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND (0.00036 J)
Thallium	0.002	ND	ND	ND	ND	ND	ND	ND	ND	

Notes:

1. MCL indicates Environmental Protection Agency (EPA) and Georgia Environmental Protection Division (EPD) maximum contaminant level.
2. (SMCL) indicates a secondary MCL that is established by EPA as a general guideline only (not enforced).
3. Results for substances are reported in milligrams per liter (mg/L). Radium results are reported in picocuries per liter (pCi/L).
4. ND (Not Detected) indicates the substance was not detected above the analytical method detection limit (MDL).
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6. N/R indicates a substance does not have an MCL or SMCL, but will be further evaluated statistically at the conclusion of all the background sampling events, as required by EPA's CCR rule.
7. TDS indicates total dissolved solids.
8. U indicates the substance was detected below the Minimum Detection Concentration (MDC) and the precision of the laboratory instruments could not produce a reliable value. Therefore, the value followed by U is qualified by the laboratory as estimated.
9. Appendix III = indicator parameters evaluated during Detection Monitoring; Appendix IV = parameters evaluated during Assessment Monitoring.



Appendix A  
Analytical Data Reports

June 8, 2016

Joju Abraham  
Southern Company Services  
Earth Sciences & Env Eng  
42 Inverness Center Parkway  
Birmingham, AL 35242

RE: Workorder: 103463 CCR - Wansley AP

Dear Joju Abraham:

The Environmental Laboratory has completed the analysis of your samples and reports the results on the attached pages. Our laboratory maintains current NELAC accreditation for those analytes listed under the scope of accreditation. Analytes not listed in this scope are currently not maintained under an accreditation program. The analytes of this report that are listed under our NELAC scope of accreditation meet all requirements of the NELAC standards, unless otherwise noted by data qualifiers. Internal clients can view the scope and effective dates of our accreditation at:

<http://environmental.southernco.com/gpc/environmental-lab/chem.html>

External clients can receive a copy of our scope of accreditation by contacting the laboratory.

All results relate only to the contents of the samples submitted. Samples will be disposed of after 30 days unless otherwise instructed. This report should only be reproduced in full with all associated records. 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.

If you have any questions or comments, contact your Program Manager:

L. Biddy

lbbiddy@southernco.com

(404) 799-2132 / 8-530-2132

Respectfully submitted,



R. S. Dickerson  
rsdicker@southernco.com  
QA/QC Specialist

Report ID: 103463 - 5036965  
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## SAMPLE SUMMARY

Workorder: 103463 CCR - Wansley AP

Lab ID	Sample ID	Analysis Request Number	Matrix	Date Collected	Date Received
103463001	WGWA-1	N/A	Water	5/17/2016 11:25	5/18/2016 10:04
103463002	WGWA-2	N/A	Water	5/17/2016 12:00	5/18/2016 10:04
103463003	FB-01(AP)	N/A	Water	5/17/2016 12:25	5/18/2016 10:04
103463004	WGWA-18	N/A	Water	5/17/2016 14:10	5/18/2016 10:04

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**ANALYTICAL RESULTS**

Workorder: 103463 CCR - Wansley AP

**Lab ID:** 103463001 **Date Received:** 5/18/2016 10:04  
**Sample ID:** WGWA-1 **Date Collected:** 5/17/2016 11:25  
**Sample Description:** Background Well-Ash Pond **Matrix:** Water  
**Location:** Wansley AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6010D						
INORGANICS					5/19/2016 10:40	KLW	5/23/2016 16:48	HAM	
Calcium	0.927	mg/L	0.100	0.500	5/19/2016 10:40	KLW	5/23/2016 16:48	HAM	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A						
			Analytical Method: EPA 7470A						
TOTAL METALS					5/24/2016 06:25	WCM	5/25/2016 07:54	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/24/2016 06:25	WCM	5/25/2016 07:54	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/19/2016 10:40	KLW	5/23/2016 19:31	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/19/2016 10:40	KLW	5/23/2016 19:31	MRP	
Boron	<0.100	mg/L	0.0200	0.100	5/19/2016 10:40	KLW	5/23/2016 19:31	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/19/2016 10:40	KLW	5/23/2016 19:31	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/19/2016 10:40	KLW	5/23/2016 19:31	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/19/2016 10:40	KLW	5/23/2016 19:31	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/19/2016 10:40	KLW	5/23/2016 19:31	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/19/2016 10:40	KLW	5/23/2016 19:31	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/19/2016 10:40	KLW	5/23/2016 19:31	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/19/2016 10:40	KLW	5/23/2016 19:31	MRP	
Barium	0.0410	mg/L	0.00200	0.0100	5/19/2016 10:40	KLW	5/23/2016 19:31	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/19/2016 10:40	KLW	5/23/2016 19:31	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	5/19/2016 10:40	KLW	5/23/2016 19:31	MRP	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							5/27/2016 11:27	LBB	
Sulfate	<1.00	mg/L	0.3000	1.00			5/26/2016 01:51	LBB	
Chloride	3.80	mg/L	0.0800	0.5000			5/27/2016 11:27	LBB	
Fluoride	0.0131J	mg/L	0.0100	0.3000			5/26/2016 01:51	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/23/2016 18:00	KLW	
TDS	<25	mg/L	25	25			5/23/2016 18:00	KLW	

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**ANALYTICAL RESULTS**

Workorder: 103463 CCR - Wansley AP

**Lab ID:** 103463002 **Date Received:** 5/18/2016 10:04  
**Sample ID:** WGWA-2 **Date Collected:** 5/17/2016 12:00  
**Sample Description:** Background Well-Ash Pond **Matrix:** Water  
**Location:** Wansley AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					5/19/2016 10:40	KLW	5/23/2016 16:54	HAM	
Calcium	12.2	mg/L	0.100	0.500	5/19/2016 10:40	KLW	5/23/2016 16:54	HAM	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
TOTAL METALS					5/24/2016 06:25	WCM	5/25/2016 08:02	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/24/2016 06:25	WCM	5/25/2016 08:02	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	5/19/2016 10:40	KLW	5/23/2016 19:36	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/19/2016 10:40	KLW	5/23/2016 19:36	MRP	
Boron	<0.100	mg/L	0.0200	0.100	5/19/2016 10:40	KLW	5/23/2016 19:36	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/19/2016 10:40	KLW	5/23/2016 19:36	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/19/2016 10:40	KLW	5/23/2016 19:36	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/19/2016 10:40	KLW	5/23/2016 19:36	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/19/2016 10:40	KLW	5/23/2016 19:36	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/19/2016 10:40	KLW	5/23/2016 19:36	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/19/2016 10:40	KLW	5/23/2016 19:36	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/19/2016 10:40	KLW	5/23/2016 19:36	MRP	
Barium	0.0308	mg/L	0.00200	0.0100	5/19/2016 10:40	KLW	5/23/2016 19:36	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/19/2016 10:40	KLW	5/23/2016 19:36	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	5/19/2016 10:40	KLW	5/23/2016 19:36	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							5/26/2016 02:21	LBB	
Sulfate	1.14	mg/L	0.3000	1.00			5/26/2016 02:21	LBB	
Chloride	2.50	mg/L	0.0400	0.2500			5/26/2016 02:21	LBB	
Fluoride	0.0538J	mg/L	0.0100	0.3000			5/26/2016 02:21	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							5/23/2016 18:00	KLW	
TDS	100	mg/L	25	25			5/23/2016 18:00	KLW	

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**ANALYTICAL RESULTS**

Workorder: 103463 CCR - Wansley AP

**Lab ID:** 103463003 **Date Received:** 5/18/2016 10:04  
**Sample ID:** FB-01(AP) **Date Collected:** 5/17/2016 12:25  
**Sample Description:** Field Blank-Ash Pond **Matrix:** Water  
**Location:** Wansley AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6010D						
INORGANICS					5/19/2016 10:40	KLW	5/23/2016 17:00	HAM	
Calcium	<0.500	mg/L	0.100	0.500	5/19/2016 10:40	KLW	5/23/2016 17:00	HAM	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A						
			Analytical Method: EPA 7470A						
TOTAL METALS					5/24/2016 06:25	WCM	5/25/2016 08:07	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/24/2016 06:25	WCM	5/25/2016 08:07	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/19/2016 10:40	KLW	5/23/2016 19:41	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/19/2016 10:40	KLW	5/23/2016 19:41	MRP	
Boron	<0.100	mg/L	0.0200	0.100	5/19/2016 10:40	KLW	5/23/2016 19:41	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/19/2016 10:40	KLW	5/23/2016 19:41	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/19/2016 10:40	KLW	5/23/2016 19:41	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/19/2016 10:40	KLW	5/23/2016 19:41	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/19/2016 10:40	KLW	5/23/2016 19:41	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/19/2016 10:40	KLW	5/23/2016 19:41	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/19/2016 10:40	KLW	5/23/2016 19:41	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/19/2016 10:40	KLW	5/23/2016 19:41	MRP	
Barium	<0.0100	mg/L	0.00200	0.0100	5/19/2016 10:40	KLW	5/23/2016 19:41	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/19/2016 10:40	KLW	5/23/2016 19:41	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	5/19/2016 10:40	KLW	5/23/2016 19:41	MRP	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							5/26/2016 02:51	LBB	
Sulfate	<1.00	mg/L	0.3000	1.00			5/26/2016 02:51	LBB	
Chloride	<0.2500	mg/L	0.0400	0.2500			5/26/2016 02:51	LBB	
Fluoride	<0.3000	mg/L	0.0100	0.3000			5/26/2016 02:51	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/23/2016 18:00	KLW	
TDS	<25	mg/L	25	25			5/23/2016 18:00	KLW	

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**ANALYTICAL RESULTS**

Workorder: 103463 CCR - Wansley AP

**Lab ID:** 103463004 **Date Received:** 5/18/2016 10:04  
**Sample ID:** WGWA-18 **Date Collected:** 5/17/2016 14:10  
**Sample Description:** Background Well-Ash Pond **Matrix:** Water  
**Location:** Wansley AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6010D						
INORGANICS					5/19/2016 10:40	KLW	5/23/2016 17:06	HAM	
Calcium	23.7	mg/L	0.100	0.500	5/19/2016 10:40	KLW	5/23/2016 17:06	HAM	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A						
			Analytical Method: EPA 7470A						
TOTAL METALS					5/24/2016 06:25	WCM	5/25/2016 08:10	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/24/2016 06:25	WCM	5/25/2016 08:10	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/19/2016 10:40	KLW	5/23/2016 19:46	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/19/2016 10:40	KLW	5/23/2016 19:46	MRP	
Boron	<0.100	mg/L	0.0200	0.100	5/19/2016 10:40	KLW	5/23/2016 19:46	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/19/2016 10:40	KLW	5/23/2016 19:46	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/19/2016 10:40	KLW	5/23/2016 19:46	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/19/2016 10:40	KLW	5/23/2016 19:46	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/19/2016 10:40	KLW	5/23/2016 19:46	MRP	
Molybdenum	0.00367J	mg/L	0.00200	0.0100	5/19/2016 10:40	KLW	5/23/2016 19:46	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/19/2016 10:40	KLW	5/23/2016 19:46	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/19/2016 10:40	KLW	5/23/2016 19:46	MRP	
Barium	0.0221	mg/L	0.00200	0.0100	5/19/2016 10:40	KLW	5/23/2016 19:46	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/19/2016 10:40	KLW	5/23/2016 19:46	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	5/19/2016 10:40	KLW	5/23/2016 19:46	MRP	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							5/27/2016 11:57	LBB	
Sulfate	19.9	mg/L	0.3000	1.00			5/26/2016 03:21	LBB	
Chloride	6.05	mg/L	0.2000	1.25			5/27/2016 11:57	LBB	
Fluoride	0.2840J	mg/L	0.0100	0.3000			5/26/2016 03:21	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/23/2016 18:00	KLW	
TDS	112	mg/L	25	25			5/23/2016 18:00	KLW	

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## ANALYTICAL RESULTS QUALIFIERS

Workorder: 103463 CCR - Wansley AP

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### PARAMETER QUALIFIERS

ND	None detected at the laboratory Method Detection Limit
MDL	Method Detection Limit
RL	Reporting Limit
J	The reported value is between the laboratory method detection limit and the laboratory reporting limit

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**QUALITY CONTROL DATA**

Workorder: 103463 CCR - Wansley AP

QC Batch: DIGM/4316 Analysis Method: EPA 6010D  
 QC Batch Method: EPA 3005A  
 Associated Lab Samples: 103463001 103463002 103463003 103463004

METHOD BLANK: 106135

Parameter	Units	Blank Result	Reporting Limit Qualifiers
INORGANICS			
Calcium	mg/L	<0.500	0.500

LABORATORY CONTROL SAMPLE: 106136

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
INORGANICS					
Calcium	mg/L	5	5.24	105	80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106137 106138 Original: 103461008

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
INORGANICS											
Calcium	mg/L	15.6	5	20.5	20.9	97.4	105	75-125	7.5	20	

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**QUALITY CONTROL DATA**

Workorder: 103463 CCR - Wansley AP

QC Batch: DIGM/4317 Analysis Method: EPA 6020B  
 QC Batch Method: EPA 3005A  
 Associated Lab Samples: 103463001 103463002 103463003 103463004

METHOD BLANK: 106139

Parameter	Units	Blank Result	Reporting Limit Qualifiers
<b>TOTAL METALS</b>			
Lithium	mg/L	<0.0500	0.0500
Beryllium	mg/L	<0.00300	0.00300
Boron	mg/L	<0.100	0.100
Chromium	mg/L	<0.0100	0.0100
Cobalt	mg/L	<0.0100	0.0100
Arsenic	mg/L	<0.00500	0.00500
Selenium	mg/L	<0.0100	0.0100
Molybdenum	mg/L	<0.0100	0.0100
Cadmium	mg/L	<0.00100	0.00100
Antimony	mg/L	<0.00300	0.00300
Barium	mg/L	<0.0100	0.0100
Thallium	mg/L	<0.00100	0.00100
Lead	mg/L	<0.00500	0.00500

LABORATORY CONTROL SAMPLE: 106140

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
<b>TOTAL METALS</b>					
Lithium	mg/L	0.2	0.214	107	80-120
Beryllium	mg/L	0.1	0.105	105	80-120
Boron	mg/L	0.1	0.105	105	80-120
Chromium	mg/L	0.1	0.111	111	80-120
Cobalt	mg/L	0.1	0.107	107	80-120
Arsenic	mg/L	0.1	0.106	106	80-120
Selenium	mg/L	0.1	0.107	107	80-120
Molybdenum	mg/L	0.1	0.106	106	80-120
Cadmium	mg/L	0.1	0.105	105	80-120
Antimony	mg/L	0.1	0.106	106	80-120
Barium	mg/L	0.1	0.112	112	80-120
Thallium	mg/L	0.1	0.0967	96.7	80-120
Lead	mg/L	0.1	0.106	106	80-120

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**QUALITY CONTROL DATA**

Workorder: 103463 CCR - Wansley AP

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106141 106142 Original: 103461004

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
<b>TOTAL METALS</b>											
Lithium	mg/L	0.01	0.2	0.216	0.216	103	103	75-125	0	20	
Beryllium	mg/L	6e-006	0.1	0.103	0.102	103	102	75-125	0.98	20	
Boron	mg/L	0.0349	0.1	0.142	0.140	107	105	75-125	1.9	20	
Chromium	mg/L	0.00424	0.1	0.109	0.109	105	105	75-125	0	20	
Cobalt	mg/L	5.2e-005	0.1	0.105	0.105	105	105	75-125	0	20	
Arsenic	mg/L	0.00021	0.1	0.107	0.107	107	107	75-125	0	20	
Selenium	mg/L	0.00020	0.1	0.105	0.103	105	103	75-125	1.9	20	
Molybdenum	mg/L	0.00015	0.1	0.110	0.110	110	109	75-125	0.91	20	
Cadmium	mg/L	0	0.1	0.106	0.107	106	107	75-125	0.94	20	
Antimony	mg/L	0.00015	0.1	0.109	0.109	109	108	75-125	0.92	20	
Barium	mg/L	0.122	0.1	0.232	0.229	110	107	75-125	2.8	20	
Thallium	mg/L	0	0.1	0.0973	0.0972	97.3	97.2	75-125	0.1	20	
Lead	mg/L	6e-005	0.1	0.105	0.105	105	105	75-125	0	20	

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**QUALITY CONTROL DATA**

Workorder: 103463 CCR - Wansley AP

QC Batch: GRAV/2873 Analysis Method: SM 2540C  
 QC Batch Method: SM 2540C  
 Associated Lab Samples: 103463001 103463002 103463003 103463004

METHOD BLANK: 106159

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
TDS	mg/L	<25	25	

LABORATORY CONTROL SAMPLE: 106162

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
TDS	mg/L	241	238	98.8	90-110	

SAMPLE DUPLICATE: 106160 Original: 103461001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
TDS	mg/L	533	553	3.7	20	

SAMPLE DUPLICATE: 106161 Original: 103463001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
TDS	mg/L	<25	<25	0	20	

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**QUALITY CONTROL DATA**

Workorder: 103463 CCR - Wansley AP

QC Batch: HGPR/1659 Analysis Method: EPA 7470A  
 QC Batch Method: EPA 7470A  
 Associated Lab Samples: 103463001 103463002 103463003 103463004

METHOD BLANK: 106258

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
TOTAL METALS				
Mercury	mg/L	<0.000500	0.000500	

METHOD BLANK: 106264

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
TOTAL METALS				
Mercury	mg/L	<0.000500	0.000500	

LABORATORY CONTROL SAMPLE: 106259

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.002	0.00200	100	80-120	

LABORATORY CONTROL SAMPLE: 106260

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.0122	0.0121	99	80-120	

LABORATORY CONTROL SAMPLE: 106265

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.002	0.00196	98	80-120	

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**QUALITY CONTROL DATA**

Workorder: 103463 CCR - Wansley AP

QC Batch: IC/3033 Analysis Method: EPA 300  
 QC Batch Method: EPA 300  
 Associated Lab Samples: 103463001 103463002 103463003 103463004

METHOD BLANK: 106322

Parameter	Units	Blank Result	Reporting Limit Qualifiers
Chloride	mg/L	<0.2500	0.2500
Sulfate	mg/L	<1.00	1.00
Fluoride	mg/L	<0.3000	0.3000

LABORATORY CONTROL SAMPLE: 106315

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
Chloride	mg/L	11.3	11.6	103	90-110
Fluoride	mg/L	6.83	6.82	99.9	90-110

LABORATORY CONTROL SAMPLE: 106323

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
Chloride	mg/L	0.5	0.4684	93.7	
Sulfate	mg/L	5	4.84	96.9	
Fluoride	mg/L	0.5	0.5169	103	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106320 106321 Original: 103440004

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Sulfate	mg/L	0	10	10.0	9.95	100	99.5	90-110	0.5	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106324 106325 Original: 103483003

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Chloride	mg/L	0	1	0.9525	0.9576	95.3	95.8	90-110	0.52	10	

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Workorder: 103463 CCR - Wansley AP

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
103463001	WGWA-1	EPA 3005A	DIGM/4316	EPA 6010D	ICP/5014
103463002	WGWA-2	EPA 3005A	DIGM/4316	EPA 6010D	ICP/5014
103463003	FB-01(AP)	EPA 3005A	DIGM/4316	EPA 6010D	ICP/5014
103463004	WGWA-18	EPA 3005A	DIGM/4316	EPA 6010D	ICP/5014
103463001	WGWA-1	EPA 3005A	DIGM/4317	EPA 6020B	ICPM/1068
103463002	WGWA-2	EPA 3005A	DIGM/4317	EPA 6020B	ICPM/1068
103463003	FB-01(AP)	EPA 3005A	DIGM/4317	EPA 6020B	ICPM/1068
103463004	WGWA-18	EPA 3005A	DIGM/4317	EPA 6020B	ICPM/1068
103463001	WGWA-1	SM 2540C	GRAV/2873		
103463002	WGWA-2	SM 2540C	GRAV/2873		
103463003	FB-01(AP)	SM 2540C	GRAV/2873		
103463004	WGWA-18	SM 2540C	GRAV/2873		
103463001	WGWA-1	EPA 7470A	HGPR/1659	EPA 7470A	CVAA/1844
103463002	WGWA-2	EPA 7470A	HGPR/1659	EPA 7470A	CVAA/1844
103463003	FB-01(AP)	EPA 7470A	HGPR/1659	EPA 7470A	CVAA/1844
103463004	WGWA-18	EPA 7470A	HGPR/1659	EPA 7470A	CVAA/1844
103463001	WGWA-1	EPA 300	IC/3033		
103463002	WGWA-2	EPA 300	IC/3033		
103463003	FB-01(AP)	EPA 300	IC/3033		
103463004	WGWA-18	EPA 300	IC/3033		

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## LABORATORY CERTIFICATIONS

Workorder: 103463 CCR - Wansley AP

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Certification Program	Certification Number
NELAC	E57554

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Georgia Power Environmental Laboratory  
 NELAP Certification #E57554  
 2480 Maner Road, BIN 39110  
 Atlanta, Georgia 30339  
 Phone: (404) 799-2100  
 Company: 8-530-2100

**ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD**

LAB USE ONLY

Work Order No. 103463  
 Reviewed By: [Signature]  
 11 Page 1 of 1

Sample Shipment Date:<sup>8</sup> 5/17/16  
 Sample Received Date:<sup>9</sup> 5/17/16  
 <sup>12</sup> Standard Turnaround Time

Sampled By:<sup>10</sup> Kristen Jurinko  
Chris Gargan, Ben Hodges  
 # of Business Days (Rush) 0  
 (Must be cleared through Env. Lab. Prior to shipment)

Company:<sup>1</sup> Southern Company Services  
 Report To: Joju Abraham  
 Address:<sup>2</sup> 241 Ralph McGill Blvd SE B10185  
 Atlanta, GA 30308  
 Phone/Fax:<sup>3</sup> 404-506-7239  
 Contact:<sup>4</sup> Joju Abraham  
 Project Location:<sup>5</sup> Plant Wansley  
 Account Number:<sup>6</sup>  
 Special Instructions:<sup>7</sup> Wansley AP CCR GW  
2 coolers

W\* - DF water

LAB USE ONLY LAB ID	Sample Number <sup>14</sup>	Collection <sup>15</sup>		Sample Description <sup>16</sup>	Sample Type	Matrix	No. of Containers	ANALYSIS REQUESTED <sup>21</sup>			PRESERVATIVE <sup>20</sup>			Sample Type Key: <sup>22</sup>	Comments	
		Date	Time					HNO3	Ice	HNO3	N	C-Composite	O-Other			G-Grab
1	WGWA-1	5/17/16	11:25	Background well - Ash Pond	G	GW	3	X								
2	WGWA-2	5/17/16	12:00	↓	G	W*	1	X								
3	FB-01(CAP)	5/17/16	12:25	Field Blank - Ash Pond	G	W*	1	X								
4	WGWA-18	5/17/16	14:10	Background well - Ash Pond	G	GW	3	X								

Matrix	HNO3	Ice	HNO3	N	ANALYSIS REQUESTED <sup>21</sup>
Metals app. III & IV	X				
EPA 6020 & EPA 7470	X				
Cl, F, SO4 EPA 300	X				
TDS SM2540C	X				
Radium 226 & 228 Ga Tech	X				

LAB USE ONLY: Sample Receipt Information<sup>28</sup>

Relinquished by:<sup>26</sup> Kristen Jurinko Date/Time 5/17/16 17:30  
 Received by:<sup>27</sup> [Signature] Date/Time 5-18-16 @ 1004 PHL2  
 Relinquished by: [Signature] Date/Time  
 Received by: [Signature] Date/Time

3.8°C (GDFL-IR-4P) ice cooler in good condition, seal intact, FedEx # 8094 5486 8463

# Sample Receipt Checklist



Client: Wansley  
 Workorder No.: 103463  
 Carrier: FEDEX

# of Samples: 4  
 Tracking No: 809484868663

Question	Answer	Comment
Radioactivity wasn't checked or is <= background as measured by a survey meter	True	
Custody seals were present on cooler	True	
Custody seals on cooler were intact	True	
Custody seals were present on sample	False	
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	3.8
COC is present	True	
COC is filled out in ink and is legible	True	Multiple mark-throughs on COC.
COC is filled out with pertinent information	True	
The field sampler's name is on the COC	True	
Sample containers have legible labels	True	
Information on the sample label agrees with information on the COC	False	Sample number WGWA-2 was missing sample collection time on container label. Sample was logged in based on COC sample collection time.
Samples are received within holding times	True	
Containers are not broken or leaking	True	
Sample collection date/times are present	True	
Appropriate sample containers are used	True	
Sample bottles are completely filled	True	
Sample preservation is checked	True	
Sample preservation is acceptable	True	
There is sufficient sample volume for all requested analyses	True	
Containers requiring zero headspace have no headspace or the bubble is < 6mm (1/4 inch)	True	
Multiphasic samples are not present	True	
Samples do not require splitting or compositing	True	

Receiving Narrative:

June 9, 2016

Joju Abraham  
Southern Company Services  
Earth Sciences & Env Eng  
42 Inverness Center Parkway  
Birmingham, AL 35242

RE: Workorder: 103477 CCR - Wansley AP

Dear Joju Abraham:

The Environmental Laboratory has completed the analysis of your samples and reports the results on the attached pages. Our laboratory maintains current NELAC accreditation for those analytes listed under the scope of accreditation. Analytes not listed in this scope are currently not maintained under an accreditation program. The analytes of this report that are listed under our NELAC scope of accreditation meet all requirements of the NELAC standards, unless otherwise noted by data qualifiers. Internal clients can view the scope and effective dates of our accreditation at:

<http://environmental.southernco.com/gpc/environmental-lab/chem.html>

External clients can receive a copy of our scope of accreditation by contacting the laboratory.

All results relate only to the contents of the samples submitted. Samples will be disposed of after 30 days unless otherwise instructed. This report should only be reproduced in full with all associated records. 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.

If you have any questions or comments, contact your Program Manager:

L. Biddy

lbiddy@southernco.com

(404) 799-2132 / 8-530-2132

Respectfully submitted,



R. S. Dickerson  
rsdicker@southernco.com  
QA/QC Specialist

Report ID: 103477 - 5037267  
GPC Report Page 1 of 30

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## SAMPLE SUMMARY

Workorder: 103477 CCR - Wansley AP

Lab ID	Sample ID	Analysis Request Number	Matrix	Date Collected	Date Received
103477001	WGWA-7	N/A	Water	5/18/2016 09:45	5/19/2016 10:00
103477002	WGWA-5	N/A	Water	5/18/2016 09:30	5/19/2016 10:00
103477003	WGWA-6	N/A	Water	5/18/2016 09:30	5/19/2016 10:00
103477004	WGWA-3	N/A	Water	5/18/2016 12:15	5/19/2016 10:00
103477005	WGWA-4	N/A	Water	5/18/2016 12:25	5/19/2016 10:00
103477006	WGWC-17	N/A	Water	5/18/2016 12:35	5/19/2016 10:00
103477007	FD-01(AP)	N/A	Water	5/18/2016 00:00	5/19/2016 10:00
103477008	FD-02(AP)	N/A	Water	5/18/2016 00:00	5/19/2016 10:00
103477009	WGWC-16	N/A	Water	5/18/2016 14:35	5/19/2016 10:00
103477010	WGWC-15	N/A	Water	5/18/2016 14:55	5/19/2016 10:00
103477011	WGWC-10	N/A	Water	5/18/2016 15:25	5/19/2016 10:00
103477012	EB-01(AP)	N/A	Water	5/18/2016 15:45	5/19/2016 10:00

Report ID: 103477 - 5037267  
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**ANALYTICAL RESULTS**

Workorder: 103477 CCR - Wansley AP

**Lab ID:** 103477001 **Date Received:** 5/19/2016 10:00  
**Sample ID:** WGWA-7 **Date Collected:** 5/18/2016 09:45  
**Sample Description:** Background Well-Ash Pond **Matrix:** Water  
**Location:** Wansley AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					5/23/2016 10:50	KLW	5/24/2016 14:46	HAM	
Calcium	1.36	mg/L	0.100	0.500	5/23/2016 10:50	KLW	5/24/2016 14:46	HAM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
TOTAL METALS					5/23/2016 11:00	KLW	5/23/2016 20:04	MRP	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/26/2016 11:56	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	5/23/2016 11:00	KLW	5/23/2016 20:04	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 20:04	MRP	
Boron	<0.100	mg/L	0.0200	0.100	5/23/2016 11:00	KLW	5/23/2016 20:04	MRP	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:04	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:04	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 20:04	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:04	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:04	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/23/2016 11:00	KLW	5/23/2016 20:04	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 20:04	MRP	
Barium	0.0114	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:04	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/23/2016 11:00	KLW	5/23/2016 20:04	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 20:04	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							5/26/2016 17:27	LBB	
Sulfate	0.3680J	mg/L	0.3000	1.00			5/26/2016 17:27	LBB	
Chloride	2.06	mg/L	0.0400	0.2500			5/26/2016 17:27	LBB	
Fluoride	0.0180J	mg/L	0.0100	0.3000			5/26/2016 17:27	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							5/23/2016 18:00	KLW	

Report ID: 103477 - 5037267  
 GPC Report Page 3 of 30

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## ANALYTICAL RESULTS

Workorder: 103477 CCR - Wansley AP

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<b>Lab ID:</b>	<b>103477001</b>	<b>Date Received:</b>	<b>5/19/2016 10:00</b>
<b>Sample ID:</b>	<b>WGWA-7</b>	<b>Date Collected:</b>	<b>5/18/2016 09:45</b>
<b>Sample Description</b>	<b>Background Well-Ash Pond</b>	<b>Matrix:</b>	<b>Water</b>
<b>Location</b>	<b>Wansley AP</b>		

---

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	31	mg/L	25	25			5/23/2016 18:00	KLW	

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**ANALYTICAL RESULTS**

Workorder: 103477 CCR - Wansley AP

<b>Lab ID:</b>	<b>103477002</b>	<b>Date Received:</b>	<b>5/19/2016 10:00</b>
<b>Sample ID:</b>	<b>WGWA-5</b>	<b>Date Collected:</b>	<b>5/18/2016 09:30</b>
<b>Sample Description</b>	<b>Background Well-Ash Pond</b>	<b>Matrix:</b>	<b>Water</b>
<b>Location</b>	<b>Wansley AP</b>		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					5/23/2016 10:50	KLW	5/24/2016 14:52	HAM	
Calcium	1.70	mg/L	0.100	0.500	5/23/2016 10:50	KLW	5/24/2016 14:52	HAM	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
TOTAL METALS					5/26/2016 06:33	WCM	5/26/2016 12:04	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/26/2016 12:04	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	5/23/2016 11:00	KLW	5/23/2016 20:28	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 20:28	MRP	
Boron	<0.100	mg/L	0.0200	0.100	5/23/2016 11:00	KLW	5/24/2016 15:52	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:28	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:28	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 20:28	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:28	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:28	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/23/2016 11:00	KLW	5/23/2016 20:28	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 20:28	MRP	
Barium	0.0198	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:28	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/23/2016 11:00	KLW	5/23/2016 20:28	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 20:28	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							5/26/2016 18:06	LBB	
Sulfate	0.9550J	mg/L	0.3000	1.00			5/26/2016 18:06	LBB	
Chloride	2.14	mg/L	0.0400	0.2500			5/26/2016 18:06	LBB	
Fluoride	0.0140J	mg/L	0.0100	0.3000			5/26/2016 18:06	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							5/23/2016 18:00	KLW	
TDS	33	mg/L	25	25			5/23/2016 18:00	KLW	

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**ANALYTICAL RESULTS**

Workorder: 103477 CCR - Wansley AP

**Lab ID:** 103477003 **Date Received:** 5/19/2016 10:00  
**Sample ID:** WGWA-6 **Date Collected:** 5/18/2016 09:30  
**Sample Description:** Background Well-Ash Pond **Matrix:** Water  
**Location:** Wansley AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
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Analysis Desc: EPA 6010D Preparation Method: EPA 3005A  
 Analytical Method: EPA 6010D

INORGANICS					5/23/2016 10:50	KLW	5/24/2016 14:58	HAM	
Calcium	27.0	mg/L	0.100	0.500	5/23/2016 10:50	KLW	5/24/2016 14:58	HAM	

Analysis Desc: EPA 7470A Preparation Method: EPA 7470A  
 Analytical Method: EPA 7470A

TOTAL METALS					5/26/2016 06:33	WCM	5/26/2016 12:10	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/26/2016 12:10	WCM	

Analysis Desc: EPA 6020B Preparation Method: EPA 3005A  
 Analytical Method: EPA 6020B

Lithium	<0.0500	mg/L	0.0100	0.0500	5/23/2016 11:00	KLW	5/23/2016 20:33	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 20:33	MRP	
Boron	<0.100	mg/L	0.0200	0.100	5/23/2016 11:00	KLW	5/24/2016 15:57	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:33	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:33	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 20:33	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:33	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:33	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/23/2016 11:00	KLW	5/23/2016 20:33	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 20:33	MRP	
Barium	0.00518J	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:33	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/23/2016 11:00	KLW	5/23/2016 20:33	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 20:33	MRP	

Analysis Desc: EPA 300 Analytical Method: EPA 300

TOTAL NUTRIENTS							5/26/2016 18:44	LBB	
Sulfate	8.88	mg/L	0.3000	1.00			5/26/2016 18:44	LBB	
Chloride	1.58	mg/L	0.0400	0.2500			5/26/2016 18:44	LBB	
Fluoride	0.1060J	mg/L	0.0100	0.3000			5/26/2016 18:44	LBB	

Analysis Desc: SM 2540C Analytical Method: SM 2540C

WET CHEMISTRY							5/23/2016 18:00	KLW	
TDS	113	mg/L	25	25			5/23/2016 18:00	KLW	

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**ANALYTICAL RESULTS**

Workorder: 103477 CCR - Wansley AP

**Lab ID:** 103477004 **Date Received:** 5/19/2016 10:00  
**Sample ID:** WGWA-3 **Date Collected:** 5/18/2016 12:15  
**Sample Description:** Background Well-Ash Pond **Matrix:** Water  
**Location:** Wansley AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6010D						
INORGANICS					5/23/2016 10:50	KLW	5/24/2016 15:04	HAM	
Calcium	2.10	mg/L	0.100	0.500	5/23/2016 10:50	KLW	5/24/2016 15:04	HAM	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A						
			Analytical Method: EPA 7470A						
TOTAL METALS					5/26/2016 06:33	WCM	5/26/2016 12:12	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/26/2016 12:12	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/23/2016 11:00	KLW	5/23/2016 20:37	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 20:37	MRP	
Boron	<0.100	mg/L	0.0200	0.100	5/23/2016 11:00	KLW	5/24/2016 16:03	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:37	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:37	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 20:37	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:37	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:37	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/23/2016 11:00	KLW	5/23/2016 20:37	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 20:37	MRP	
Barium	0.0174	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:37	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/23/2016 11:00	KLW	5/23/2016 20:37	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 20:37	MRP	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							5/26/2016 19:22	LBB	
Sulfate	0.8210J	mg/L	0.3000	1.00			5/26/2016 19:22	LBB	
Chloride	1.92	mg/L	0.0400	0.2500			5/26/2016 19:22	LBB	
Fluoride	0.0290J	mg/L	0.0100	0.3000			5/26/2016 19:22	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/23/2016 18:00	KLW	
TDS	29	mg/L	25	25			5/23/2016 18:00	KLW	

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### ANALYTICAL RESULTS

Workorder: 103477 CCR - Wansley AP

<b>Lab ID:</b>	<b>103477005</b>	<b>Date Received:</b>	<b>5/19/2016 10:00</b>
<b>Sample ID:</b>	<b>WGWA-4</b>	<b>Date Collected:</b>	<b>5/18/2016 12:25</b>
<b>Sample Description</b>	<b>Background Well-Ash Pond</b>	<b>Matrix:</b>	<b>Water</b>
<b>Location</b>	<b>Wansley AP</b>		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					5/23/2016 10:50	KLW	5/24/2016 15:34	HAM	
Calcium	17.9	mg/L	0.100	0.500	5/23/2016 10:50	KLW	5/24/2016 15:34	HAM	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
TOTAL METALS					5/26/2016 06:33	WCM	5/26/2016 12:15	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/26/2016 12:15	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	5/23/2016 11:00	KLW	5/23/2016 20:42	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 20:42	MRP	
Boron	<0.100	mg/L	0.0200	0.100	5/23/2016 11:00	KLW	5/24/2016 16:08	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:42	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:42	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 20:42	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:42	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:42	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/23/2016 11:00	KLW	5/23/2016 20:42	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 20:42	MRP	
Barium	0.00723J	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:42	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/23/2016 11:00	KLW	5/23/2016 20:42	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 20:42	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							5/26/2016 20:01	LBB	
Sulfate	5.32	mg/L	0.3000	1.00			5/26/2016 20:01	LBB	
Chloride	1.45	mg/L	0.0400	0.2500			5/26/2016 20:01	LBB	
Fluoride	0.1640J	mg/L	0.0100	0.3000			5/26/2016 20:01	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							5/23/2016 18:00	KLW	
TDS	101	mg/L	25	25			5/23/2016 18:00	KLW	

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**ANALYTICAL RESULTS**

Workorder: 103477 CCR - Wansley AP

**Lab ID:** 103477006 **Date Received:** 5/19/2016 10:00  
**Sample ID:** WGWC-17 **Date Collected:** 5/18/2016 12:35  
**Sample Description:** Monitoring Well-Ash Pond **Matrix:** Water  
**Location:** Wansley AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
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Analysis Desc: EPA 6010D Preparation Method: EPA 3005A  
 Analytical Method: EPA 6010D

INORGANICS					5/23/2016 10:50	KLW	5/24/2016 15:40	HAM	
Calcium	8.24	mg/L	0.100	0.500	5/23/2016 10:50	KLW	5/24/2016 15:40	HAM	

Analysis Desc: EPA 7470A Preparation Method: EPA 7470A  
 Analytical Method: EPA 7470A

TOTAL METALS					5/26/2016 06:33	WCM	5/26/2016 12:18	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/26/2016 12:18	WCM	

Analysis Desc: EPA 6020B Preparation Method: EPA 3005A  
 Analytical Method: EPA 6020B

Lithium	<0.0500	mg/L	0.0100	0.0500	5/23/2016 11:00	KLW	5/23/2016 20:47	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 20:47	MRP	
Boron	<0.100	mg/L	0.0200	0.100	5/23/2016 11:00	KLW	5/24/2016 16:13	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:47	MRP	
Cobalt	0.00245J	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:47	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 20:47	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:47	MRP	
Molybdenum	0.00526J	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:47	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/23/2016 11:00	KLW	5/23/2016 20:47	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 20:47	MRP	
Barium	0.0219	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:47	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/23/2016 11:00	KLW	5/23/2016 20:47	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 20:47	MRP	

Analysis Desc: EPA 300 Analytical Method: EPA 300

TOTAL NUTRIENTS							5/26/2016 20:39	LBB	
Sulfate	32.1	mg/L	0.6000	2.00			5/27/2016 08:49	LBB	
Chloride	2.72	mg/L	0.0400	0.2500			5/26/2016 20:39	LBB	
Fluoride	0.1210J	mg/L	0.0100	0.3000			5/26/2016 20:39	LBB	

Analysis Desc: SM 2540C Analytical Method: SM 2540C

WET CHEMISTRY							5/23/2016 18:00	KLW	
TDS	107	mg/L	25	25			5/23/2016 18:00	KLW	

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**ANALYTICAL RESULTS**

Workorder: 103477 CCR - Wansley AP

**Lab ID:** 103477007 **Date Received:** 5/19/2016 10:00  
**Sample ID:** FD-01(AP) **Date Collected:** 5/18/2016 00:00  
**Sample Description:** Field Duplicate-Ash Pond **Matrix:** Water  
**Location:** Wansley AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
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Analysis Desc: EPA 6010D Preparation Method: EPA 3005A  
 Analytical Method: EPA 6010D

INORGANICS					5/23/2016 10:50	KLW	5/24/2016 15:46	HAM	
Calcium	1.23	mg/L	0.100	0.500	5/23/2016 10:50	KLW	5/24/2016 15:46	HAM	

Analysis Desc: EPA 7470A Preparation Method: EPA 7470A  
 Analytical Method: EPA 7470A

TOTAL METALS					5/26/2016 06:33	WCM	5/26/2016 12:20	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/26/2016 12:20	WCM	

Analysis Desc: EPA 6020B Preparation Method: EPA 3005A  
 Analytical Method: EPA 6020B

Lithium	<0.0500	mg/L	0.0100	0.0500	5/23/2016 11:00	KLW	5/23/2016 20:52	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 20:52	MRP	
Boron	<0.100	mg/L	0.0200	0.100	5/23/2016 11:00	KLW	5/24/2016 16:23	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:52	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:52	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 20:52	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:52	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:52	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/23/2016 11:00	KLW	5/23/2016 20:52	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 20:52	MRP	
Barium	0.0123	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:52	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/23/2016 11:00	KLW	5/23/2016 20:52	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 20:52	MRP	

Analysis Desc: EPA 300 Analytical Method: EPA 300

TOTAL NUTRIENTS							5/26/2016 23:51	LBB	
Sulfate	0.3670J	mg/L	0.3000	1.00			5/26/2016 23:51	LBB	
Chloride	2.06	mg/L	0.0400	0.2500			5/26/2016 23:51	LBB	
Fluoride	0.0180J	mg/L	0.0100	0.3000			5/26/2016 23:51	LBB	

Analysis Desc: SM 2540C Analytical Method: SM 2540C

WET CHEMISTRY							5/23/2016 18:00	KLW	
TDS	<25	mg/L	25	25			5/23/2016 18:00	KLW	

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**ANALYTICAL RESULTS**

Workorder: 103477 CCR - Wansley AP

**Lab ID:** 103477008 **Date Received:** 5/19/2016 10:00  
**Sample ID:** FD-02(AP) **Date Collected:** 5/18/2016 00:00  
**Sample Description:** Field Duplicate-Ash Pond **Matrix:** Water  
**Location:** Wansley AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6010D						
INORGANICS					5/23/2016 10:50	KLW	5/24/2016 17:17	HAM	
Calcium	174	mg/L	0.500	2.50	5/23/2016 10:50	KLW	5/24/2016 17:17	HAM	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A						
			Analytical Method: EPA 7470A						
TOTAL METALS					5/26/2016 06:33	WCM	5/26/2016 12:23	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/26/2016 12:23	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/23/2016 11:00	KLW	5/23/2016 20:56	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 20:56	MRP	
Boron	4.30	mg/L	0.200	1.00	5/23/2016 11:00	KLW	5/24/2016 16:29	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:56	MRP	
Cobalt	0.00689J	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:56	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 20:56	MRP	
Selenium	0.00782J	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:56	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:56	MRP	
Cadmium	0.000386J	mg/L	0.000100	0.00100	5/23/2016 11:00	KLW	5/23/2016 20:56	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 20:56	MRP	
Barium	0.0684	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 20:56	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/23/2016 11:00	KLW	5/23/2016 20:56	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 20:56	MRP	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							5/27/2016 09:27	LBB	
Sulfate	389	mg/L	15.0	50.0			5/27/2016 09:27	LBB	
Chloride	217	mg/L	2.00	12.5			5/27/2016 09:27	LBB	L1
Fluoride	0.1000J	mg/L	0.0100	0.3000			5/27/2016 01:46	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/23/2016 18:00	KLW	
TDS	1000	mg/L	25	25			5/23/2016 18:00	KLW	

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### ANALYTICAL RESULTS

Workorder: 103477 CCR - Wansley AP

<b>Lab ID:</b>	103477009	<b>Date Received:</b>	5/19/2016 10:00
<b>Sample ID:</b>	WGWC-16	<b>Date Collected:</b>	5/18/2016 14:35
<b>Sample Description</b>	Monitoring Well-Ash Pond	<b>Matrix:</b>	Water
<b>Location</b>	Wansley AP		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6010D						
INORGANICS					5/23/2016 10:50	KLW	5/24/2016 17:23	HAM	
Calcium	168	mg/L	0.500	2.50	5/23/2016 10:50	KLW	5/24/2016 17:23	HAM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
TOTAL METALS					5/23/2016 11:00	KLW	5/23/2016 21:01	MRP	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A						
			Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/26/2016 12:26	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/23/2016 11:00	KLW	5/23/2016 21:01	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 21:01	MRP	
Boron	4.48	mg/L	0.200	1.00	5/24/2016 12:30	KLW	5/24/2016 18:39	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:01	MRP	
Cobalt	0.00690J	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:01	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 21:01	MRP	
Selenium	0.00735J	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:01	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:01	MRP	
Cadmium	0.000362J	mg/L	0.000100	0.00100	5/23/2016 11:00	KLW	5/23/2016 21:01	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 21:01	MRP	
Barium	0.0715	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:01	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/23/2016 11:00	KLW	5/23/2016 21:01	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 21:01	MRP	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							5/27/2016 10:06	LBB	
Sulfate	388	mg/L	15.0	50.0			5/27/2016 10:06	LBB	
Chloride	217	mg/L	2.00	12.5			5/27/2016 10:06	LBB	
Fluoride	0.1000J	mg/L	0.0100	0.3000			5/27/2016 02:25	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/23/2016 18:00	KLW	

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**ANALYTICAL RESULTS**

Workorder: 103477 CCR - Wansley AP

<b>Lab ID:</b>	<b>103477009</b>	<b>Date Received:</b>	<b>5/19/2016 10:00</b>
<b>Sample ID:</b>	<b>WGWC-16</b>	<b>Date Collected:</b>	<b>5/18/2016 14:35</b>
<b>Sample Description</b>	<b>Monitoring Well-Ash Pond</b>	<b>Matrix:</b>	<b>Water</b>
<b>Location</b>	<b>Wansley AP</b>		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	1080	mg/L	25	25			5/23/2016 18:00	KLW	

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**ANALYTICAL RESULTS**

Workorder: 103477 CCR - Wansley AP

**Lab ID:** 103477010 **Date Received:** 5/19/2016 10:00  
**Sample ID:** WGWC-15 **Date Collected:** 5/18/2016 14:55  
**Sample Description:** Monitoring Well-Ash Pond **Matrix:** Water  
**Location:** Wansley AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
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Analysis Desc: EPA 6010D Preparation Method: EPA 3005A  
 Analytical Method: EPA 6010D

INORGANICS					5/23/2016 10:50	KLW	5/24/2016 16:17	HAM	
Calcium	32.5	mg/L	0.100	0.500	5/23/2016 10:50	KLW	5/24/2016 16:17	HAM	

Analysis Desc: EPA 7470A Preparation Method: EPA 7470A  
 Analytical Method: EPA 7470A

TOTAL METALS					5/26/2016 06:33	WCM	5/26/2016 12:29	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/26/2016 12:29	WCM	

Analysis Desc: EPA 6020B Preparation Method: EPA 3005A  
 Analytical Method: EPA 6020B

Lithium	<0.0500	mg/L	0.0100	0.0500	5/23/2016 11:00	KLW	5/23/2016 21:34	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 21:34	MRP	
Boron	<0.100	mg/L	0.0200	0.100	5/23/2016 11:00	KLW	5/24/2016 16:34	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:34	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:34	MRP	
Arsenic	0.00345J	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 21:34	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:34	MRP	
Molybdenum	0.0153	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:34	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/23/2016 11:00	KLW	5/23/2016 21:34	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 21:34	MRP	
Barium	0.0206	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:34	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/23/2016 11:00	KLW	5/23/2016 21:34	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 21:34	MRP	

Analysis Desc: EPA 300 Analytical Method: EPA 300

TOTAL NUTRIENTS							5/27/2016 10:44	LBB	
Sulfate	50.7	mg/L	1.50	5.00			5/27/2016 10:44	LBB	
Chloride	4.59	mg/L	0.2000	1.25			5/27/2016 10:44	LBB	
Fluoride	0.7790	mg/L	0.0100	0.3000			5/27/2016 03:03	LBB	

Analysis Desc: SM 2540C Analytical Method: SM 2540C

WET CHEMISTRY							5/23/2016 18:00	KLW	
TDS	190	mg/L	25	25			5/23/2016 18:00	KLW	

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**ANALYTICAL RESULTS**

Workorder: 103477 CCR - Wansley AP

**Lab ID:** 103477011 **Date Received:** 5/19/2016 10:00  
**Sample ID:** WGWC-10 **Date Collected:** 5/18/2016 15:25  
**Sample Description:** Monitoring Well-Ash Pond **Matrix:** Water  
**Location:** Wansley AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					5/23/2016 10:50	KLW	5/24/2016 16:23	HAM	
Calcium	7.17	mg/L	0.100	0.500	5/23/2016 10:50	KLW	5/24/2016 16:23	HAM	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
TOTAL METALS					5/26/2016 06:33	WCM	5/26/2016 12:42	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/26/2016 12:42	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	0.0320J	mg/L	0.0100	0.0500	5/23/2016 11:00	KLW	5/23/2016 21:39	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 21:39	MRP	
Boron	<0.100	mg/L	0.0200	0.100	5/23/2016 11:00	KLW	5/24/2016 16:39	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:39	MRP	
Cobalt	0.00201J	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:39	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 21:39	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:39	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:39	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/23/2016 11:00	KLW	5/23/2016 21:39	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 21:39	MRP	
Barium	0.0391	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:39	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/23/2016 11:00	KLW	5/23/2016 21:39	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 21:39	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							5/27/2016 03:42	LBB	
Sulfate	2.84	mg/L	0.3000	1.00			5/27/2016 03:42	LBB	
Chloride	1.45	mg/L	0.0400	0.2500			5/27/2016 03:42	LBB	
Fluoride	0.2060J	mg/L	0.0100	0.3000			5/27/2016 03:42	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							5/23/2016 18:00	KLW	
TDS	70	mg/L	25	25			5/23/2016 18:00	KLW	

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**ANALYTICAL RESULTS**

Workorder: 103477 CCR - Wansley AP

**Lab ID:** 103477012 **Date Received:** 5/19/2016 10:00  
**Sample ID:** EB-01(AP) **Date Collected:** 5/18/2016 15:45  
**Sample Description:** Equipment Blank-Ash Pond **Matrix:** Water  
**Location:** Wansley AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
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Analysis Desc: EPA 6010D Preparation Method: EPA 3005A  
 Analytical Method: EPA 6010D

INORGANICS					5/23/2016 10:50	KLW	5/24/2016 16:29	HAM	
Calcium	<0.500	mg/L	0.100	0.500	5/23/2016 10:50	KLW	5/24/2016 16:29	HAM	

Analysis Desc: EPA 7470A Preparation Method: EPA 7470A  
 Analytical Method: EPA 7470A

TOTAL METALS					5/26/2016 06:33	WCM	5/26/2016 12:45	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/26/2016 12:45	WCM	

Analysis Desc: EPA 6020B Preparation Method: EPA 3005A  
 Analytical Method: EPA 6020B

Lithium	<0.0500	mg/L	0.0100	0.0500	5/23/2016 11:00	KLW	5/23/2016 21:43	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 21:43	MRP	
Boron	<0.100	mg/L	0.0200	0.100	5/23/2016 11:00	KLW	5/24/2016 17:05	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:43	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:43	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 21:43	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:43	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:43	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/23/2016 11:00	KLW	5/23/2016 21:43	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 21:43	MRP	
Barium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:43	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/23/2016 11:00	KLW	5/23/2016 21:43	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 21:43	MRP	

Analysis Desc: EPA 300 Analytical Method: EPA 300

TOTAL NUTRIENTS							5/27/2016 04:20	LBB	
Sulfate	<1.00	mg/L	0.3000	1.00			5/27/2016 04:20	LBB	
Chloride	<0.2500	mg/L	0.0400	0.2500			5/27/2016 04:20	LBB	
Fluoride	<0.3000	mg/L	0.0100	0.3000			5/27/2016 04:20	LBB	

Analysis Desc: SM 2540C Analytical Method: SM 2540C

WET CHEMISTRY							5/23/2016 18:00	KLW	
TDS	<25	mg/L	25	25			5/23/2016 18:00	KLW	

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## ANALYTICAL RESULTS QUALIFIERS

Workorder: 103477 CCR - Wansley AP

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### PARAMETER QUALIFIERS

- ND      None detected at the laboratory Method Detection Limit
- MDL    Method Detection Limit
- RL      Reporting Limit
- J        The reported value is between the laboratory method detection limit and the laboratory reporting limit
  
- L1      Value exceeds the instrument calibration range but is within the verified linear dynamic range.

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**QUALITY CONTROL DATA**

Workorder: 103477 CCR - Wansley AP

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QC Batch: GRAV/2873 Analysis Method: SM 2540C  
 QC Batch Method: SM 2540C  
 Associated Lab Samples: 103463001 103463002 103463003 103463004 103477001 103477002  
 103477003

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METHOD BLANK: 106159

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			
TDS	mg/L	<25	25

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LABORATORY CONTROL SAMPLE: 106162

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
TDS	mg/L	241	238	98.8	90-110

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SAMPLE DUPLICATE: 106161

Original: 103463001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
TDS	mg/L	<25	<25	0	20

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**QUALITY CONTROL DATA**

Workorder: 103477 CCR - Wansley AP

QC Batch:	DIGM/4320		Analysis Method:	EPA 6020B		
QC Batch Method:	EPA 3005A					
Associated Lab Samples:	103477001	103477002	103477003	103477004	103477005	103477006
	103477007	103477008	103477009	103477010	103477011	103477012

METHOD BLANK: 106216

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
<b>TOTAL METALS</b>				
Lithium	mg/L	<0.0500	0.0500	
Beryllium	mg/L	<0.00300	0.00300	
Boron	mg/L	<0.100	0.100	
Chromium	mg/L	<0.0100	0.0100	
Cobalt	mg/L	<0.0100	0.0100	
Arsenic	mg/L	<0.00500	0.00500	
Selenium	mg/L	<0.0100	0.0100	
Molybdenum	mg/L	<0.0100	0.0100	
Cadmium	mg/L	<0.00100	0.00100	
Antimony	mg/L	<0.00300	0.00300	
Barium	mg/L	<0.0100	0.0100	
Thallium	mg/L	<0.00100	0.00100	
Lead	mg/L	<0.00500	0.00500	

LABORATORY CONTROL SAMPLE: 106217

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
<b>TOTAL METALS</b>						
Lithium	mg/L	0.2	0.217	109	80-120	
Beryllium	mg/L	0.1	0.105	105	80-120	
Boron	mg/L	0.3	0.309	103	80-120	
Chromium	mg/L	0.1	0.108	108	80-120	
Cobalt	mg/L	0.1	0.110	110	80-120	
Arsenic	mg/L	0.1	0.106	106	80-120	
Selenium	mg/L	0.1	0.105	105	80-120	
Molybdenum	mg/L	0.1	0.106	106	80-120	
Cadmium	mg/L	0.1	0.107	107	80-120	
Antimony	mg/L	0.1	0.107	107	80-120	
Barium	mg/L	0.1	0.110	110	80-120	
Thallium	mg/L	0.1	0.0985	98.5	80-120	
Lead	mg/L	0.1	0.107	107	80-120	

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**QUALITY CONTROL DATA**

Workorder: 103477 CCR - Wansley AP

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106218 106219 Original: 103477009

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
<b>TOTAL METALS</b>											
Lithium	mg/L	0.00761	0.2	0.215	0.211	104	102	75-125	1.9	20	
Beryllium	mg/L	5.7e-005	0.1	0.100	0.0988	100	98.7	75-125	1.3	20	
Chromium	mg/L	0.00037	0.1	0.101	0.100	100	99.9	75-125	0.1	20	
Cobalt	mg/L	0.0069	0.1	0.106	0.105	98.9	97.8	75-125	1.1	20	
Arsenic	mg/L	0.00038	0.1	0.0996	0.101	99.2	101	75-125	1.8	20	
Selenium	mg/L	0.00735	0.1	0.105	0.110	97.9	102	75-125	4.1	20	
Molybdenum	mg/L	0.00036	0.1	0.105	0.106	105	106	75-125	0.95	20	
Cadmium	mg/L	0.00036	0.1	0.103	0.103	103	102	75-125	0.98	20	
Antimony	mg/L	0.00019	0.1	0.103	0.103	103	103	75-125	0	20	
Barium	mg/L	0.0715	0.1	0.173	0.172	102	100	75-125	2	20	
Thallium	mg/L	8.8e-005	0.1	0.0951	0.0945	95	94.4	75-125	0.63	20	
Lead	mg/L	9.2e-005	0.1	0.101	0.101	101	101	75-125	0	20	

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**QUALITY CONTROL DATA**

Workorder: 103477 CCR - Wansley AP

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QC Batch:	DIGM/4323	Analysis Method:	EPA 6010D			
QC Batch Method:	EPA 3005A					
Associated Lab Samples:	103477001	103477002	103477003	103477004	103477005	103477006
	103477007	103477008	103477009	103477010	103477011	103477012

---

METHOD BLANK: 106228

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
<b>INORGANICS</b>				
Calcium	mg/L	<0.500	0.500	

---

LABORATORY CONTROL SAMPLE: 106229

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
<b>INORGANICS</b>						
Calcium	mg/L	5	5.53	111	80-120	

---

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106230                      106231                      Original: 103477002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
<b>INORGANICS</b>											
Calcium	mg/L	1.7	5	6.41	6.52	94.2	96.4	75-125	2.3	20	

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**QUALITY CONTROL DATA**

Workorder: 103477 CCR - Wansley AP

QC Batch: GRAV/2875 Analysis Method: SM 2540C  
 QC Batch Method: SM 2540C  
 Associated Lab Samples: 103477004 103477005 103477006 103477007 103477008 103477009  
 103477010 103477011 103477012

METHOD BLANK: 106241

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
TDS	mg/L	<25	25	

LABORATORY CONTROL SAMPLE: 106244

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
TDS	mg/L	241	224	92.9	90-110	

SAMPLE DUPLICATE: 106242 Original: 103477004

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
TDS	mg/L	29	29	0	20	

SAMPLE DUPLICATE: 106243 Original: 103483001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
TDS	mg/L	276	249	10.3	20	

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**QUALITY CONTROL DATA**

Workorder: 103477 CCR - Wansley AP

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QC Batch:	IC/3034	Analysis Method:	EPA 300			
QC Batch Method:	EPA 300					
Associated Lab Samples:	103477001	103477002	103477003	103477004	103477005	103477006
	103477007	103477008	103477009	103477010	103477011	103477012

---

METHOD BLANK: 106334

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Chloride	mg/L	<0.2500	0.2500	
Sulfate	mg/L	<1.00	1.00	
Fluoride	mg/L	<0.3000	0.3000	

METHOD BLANK: 106342

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Chloride	mg/L	<0.2500	0.2500	
Sulfate	mg/L	<1.00	1.00	
Fluoride	mg/L	<0.3000	0.3000	

LABORATORY CONTROL SAMPLE: 106335

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.5	0.4970	99.4	90-110	
Sulfate	mg/L	5	5.01	100	90-110	
Fluoride	mg/L	0.5	0.5270	105	90-110	

LABORATORY CONTROL SAMPLE: 106343

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.5	0.5000	100	90-110	
Sulfate	mg/L	5	5.04	101	90-110	
Fluoride	mg/L	0.5	0.5310	106	90-110	

LABORATORY CONTROL SAMPLE: 106669

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	11.3	11.7	103	90-110	
Fluoride	mg/L	6.83	6.85	100	90-110	

Report ID: 103477 - 5037267  
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**QUALITY CONTROL DATA**

Workorder: 103477 CCR - Wansley AP

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106340 106341 Original: 103472001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Sulfate	mg/L	4.44	10	14.3	14.4	99	99.5	90-110	0.5	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106344 106345 Original: 103477007

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Chloride	mg/L	2.06	1	2.99	3.01	93.4	94.8	90-110	1.5	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106346 106347 Original: 103477007

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Fluoride	mg/L	0.018	1	1.06	1.06	104	105	90-110	0.96	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106348 106349 Original: 103477007

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Sulfate	mg/L	0.367	10	10.5	10.5	101	101	90-110	0	10	

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**QUALITY CONTROL DATA**

Workorder: 103477 CCR - Wansley AP

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QC Batch:	HGPR/1660	Analysis Method:		EPA 7470A		
QC Batch Method:	EPA 7470A					
Associated Lab Samples:	103477001	103477002	103477003	103477004	103477005	103477006
	103477007	103477008	103477009	103477010	103477011	103477012

---

METHOD BLANK: 106443

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
<b>TOTAL METALS</b>				
Mercury	mg/L	<0.000500	0.000500	

METHOD BLANK: 106449

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
<b>TOTAL METALS</b>				
Mercury	mg/L	<0.000500	0.000500	

LABORATORY CONTROL SAMPLE: 106444

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
<b>TOTAL METALS</b>						
Mercury	mg/L	0.002	0.00204	102	80-120	

LABORATORY CONTROL SAMPLE: 106445

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
<b>TOTAL METALS</b>						
Mercury	mg/L	0.0122	0.0123	100	80-120	

LABORATORY CONTROL SAMPLE: 106450

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
<b>TOTAL METALS</b>						
Mercury	mg/L	0.002	0.00201	100	80-120	

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**QUALITY CONTROL DATA**

Workorder: 103477 CCR - Wansley AP

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106446                      106447                      Original: 103477001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Mercury	mg/L	1.18e-00	0.002	0.00208	0.00203	103	101	80-120	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106451                      106452                      Original: 103515001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Mercury	mg/L	1.47e-00	0.002	0.00195	0.00186	97	92	80-120	5.3	20	

SAMPLE DUPLICATE: 106448    Original: 103477002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
TOTAL METALS						
Mercury	mg/L	<0.000500	<0.000500	0	20	

SAMPLE DUPLICATE: 106453    Original: 103515002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
TOTAL METALS						
Mercury	mg/L	<0.000500	<0.000500	2.7	20	

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**QUALITY CONTROL DATA**

Workorder: 103477 CCR - Wansley AP

QC Batch: DIGM/4338 Analysis Method: EPA 6020B  
 QC Batch Method: EPA 3005A  
 Associated Lab Samples: 103477009

METHOD BLANK: 106568

Parameter	Units	Blank Result	Reporting Limit Qualifiers
TOTAL METALS			
Boron	mg/L	<0.100	0.100

LABORATORY CONTROL SAMPLE: 106569

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
TOTAL METALS					
Boron	mg/L	0.3	0.295	98.5	80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106218 106219 Original: 103477009

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Boron	mg/L	4.48	3	7.48	7.15	99.8	88.9	75-125	11.6	20	

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Workorder: 103477 CCR - Wansley AP

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
103477001	WGWA-7	SM 2540C	GRAV/2873		
103477002	WGWA-5	SM 2540C	GRAV/2873		
103477003	WGWA-6	SM 2540C	GRAV/2873		
103477001	WGWA-7	EPA 3005A	DIGM/4320	EPA 6020B	ICPM/1069
103477002	WGWA-5	EPA 3005A	DIGM/4320	EPA 6020B	ICPM/1069
103477003	WGWA-6	EPA 3005A	DIGM/4320	EPA 6020B	ICPM/1069
103477004	WGWA-3	EPA 3005A	DIGM/4320	EPA 6020B	ICPM/1069
103477005	WGWA-4	EPA 3005A	DIGM/4320	EPA 6020B	ICPM/1069
103477006	WGWC-17	EPA 3005A	DIGM/4320	EPA 6020B	ICPM/1069
103477007	FD-01(AP)	EPA 3005A	DIGM/4320	EPA 6020B	ICPM/1069
103477008	FD-02(AP)	EPA 3005A	DIGM/4320	EPA 6020B	ICPM/1069
103477009	WGWC-16	EPA 3005A	DIGM/4320	EPA 6020B	ICPM/1069
103477010	WGWC-15	EPA 3005A	DIGM/4320	EPA 6020B	ICPM/1069
103477011	WGWC-10	EPA 3005A	DIGM/4320	EPA 6020B	ICPM/1069
103477012	EB-01(AP)	EPA 3005A	DIGM/4320	EPA 6020B	ICPM/1069
103477001	WGWA-7	EPA 3005A	DIGM/4323	EPA 6010D	ICP/5018
103477002	WGWA-5	EPA 3005A	DIGM/4323	EPA 6010D	ICP/5018
103477003	WGWA-6	EPA 3005A	DIGM/4323	EPA 6010D	ICP/5018
103477004	WGWA-3	EPA 3005A	DIGM/4323	EPA 6010D	ICP/5018
103477005	WGWA-4	EPA 3005A	DIGM/4323	EPA 6010D	ICP/5018
103477006	WGWC-17	EPA 3005A	DIGM/4323	EPA 6010D	ICP/5018
103477007	FD-01(AP)	EPA 3005A	DIGM/4323	EPA 6010D	ICP/5018
103477008	FD-02(AP)	EPA 3005A	DIGM/4323	EPA 6010D	ICP/5018
103477009	WGWC-16	EPA 3005A	DIGM/4323	EPA 6010D	ICP/5018
103477010	WGWC-15	EPA 3005A	DIGM/4323	EPA 6010D	ICP/5018
103477011	WGWC-10	EPA 3005A	DIGM/4323	EPA 6010D	ICP/5018
103477012	EB-01(AP)	EPA 3005A	DIGM/4323	EPA 6010D	ICP/5018
103477004	WGWA-3	SM 2540C	GRAV/2875		
103477005	WGWA-4	SM 2540C	GRAV/2875		
103477006	WGWC-17	SM 2540C	GRAV/2875		
103477007	FD-01(AP)	SM 2540C	GRAV/2875		

Report ID: 103477 - 5037267  
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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Workorder: 103477 CCR - Wansley AP

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
103477008	FD-02(AP)	SM 2540C	GRAV/2875		
103477009	WGWC-16	SM 2540C	GRAV/2875		
103477010	WGWC-15	SM 2540C	GRAV/2875		
103477011	WGWC-10	SM 2540C	GRAV/2875		
103477012	EB-01(AP)	SM 2540C	GRAV/2875		
103477001	WGWA-7	EPA 300	IC/3034		
103477002	WGWA-5	EPA 300	IC/3034		
103477003	WGWA-6	EPA 300	IC/3034		
103477004	WGWA-3	EPA 300	IC/3034		
103477005	WGWA-4	EPA 300	IC/3034		
103477006	WGWC-17	EPA 300	IC/3034		
103477007	FD-01(AP)	EPA 300	IC/3034		
103477008	FD-02(AP)	EPA 300	IC/3034		
103477009	WGWC-16	EPA 300	IC/3034		
103477010	WGWC-15	EPA 300	IC/3034		
103477011	WGWC-10	EPA 300	IC/3034		
103477012	EB-01(AP)	EPA 300	IC/3034		
103477001	WGWA-7	EPA 7470A	HGPR/1660	EPA 7470A	CVAA/1847
103477002	WGWA-5	EPA 7470A	HGPR/1660	EPA 7470A	CVAA/1847
103477003	WGWA-6	EPA 7470A	HGPR/1660	EPA 7470A	CVAA/1847
103477004	WGWA-3	EPA 7470A	HGPR/1660	EPA 7470A	CVAA/1847
103477005	WGWA-4	EPA 7470A	HGPR/1660	EPA 7470A	CVAA/1847
103477006	WGWC-17	EPA 7470A	HGPR/1660	EPA 7470A	CVAA/1847
103477007	FD-01(AP)	EPA 7470A	HGPR/1660	EPA 7470A	CVAA/1847
103477008	FD-02(AP)	EPA 7470A	HGPR/1660	EPA 7470A	CVAA/1847
103477009	WGWC-16	EPA 7470A	HGPR/1660	EPA 7470A	CVAA/1847
103477010	WGWC-15	EPA 7470A	HGPR/1660	EPA 7470A	CVAA/1847
103477011	WGWC-10	EPA 7470A	HGPR/1660	EPA 7470A	CVAA/1847
103477012	EB-01(AP)	EPA 7470A	HGPR/1660	EPA 7470A	CVAA/1847
103477009	WGWC-16	EPA 3005A	DIGM/4338	EPA 6020B	ICPM/1071

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## LABORATORY CERTIFICATIONS

Workorder: 103477 CCR - Wansley AP

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Certification Program	Certification Number
NELAC	E57554

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Georgia Power Environmental Laboratory  
 NELAP Certification #E57554  
 2480 Maner Road, BIN 39110  
 Atlanta, Georgia 30339  
 Phone: (404) 799-2100  
 Company: 8-530-2100

**ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD**

**LAB USE ONLY**

Work Order No. 103477  
 Reviewed By: Amj 5/20/16

Page 1 of 1

Sample Shipment Date:<sup>8</sup> 5/18/16  
 Sample Received Date:<sup>9</sup> 5/18/16  
 <sup>12</sup> Standard Turnaround Time

Company:<sup>1</sup> Southern Company Services  
 Report To: Joju Abraham  
 Address:<sup>2</sup> 241 Ralph McGill Blvd SE B10185  
Atlanta, GA 30308  
 Phone/Fax:<sup>3</sup> 404-506-7239  
 Contact:<sup>4</sup> Joju Abraham  
 Project Location:<sup>5</sup> Plant Wansley  
 Account Number:<sup>6</sup> \_\_\_\_\_  
 Special \_\_\_\_\_  
 Instructions:<sup>7</sup> Wansley AP CCR GW

Sampled By:<sup>10</sup> Kristen Jurinko  
Chris Gargan, Ben Hodges

# of Business Days (Rush)  
 (Must be cleared through Env. Lab. Prior to shipment)

LAB USE ONLY LAB ID	Sample Number <sup>14</sup>	Collection <sup>15</sup>		Sample Description <sup>16</sup>	Sample Type	Matrix	No. of Containers	ANALYSIS REQUESTED <sup>21</sup>			PRESERVATIVE <sup>20</sup>		Sample Type Key: <sup>22</sup> G-Grab O-Other C-Composite
		Date	Time					HNO3	Ice	HNO3	N	N	
103477001	WGWA-7	5/18/16	0945	Backgroundwell - Ash Pond	GW	GW	3						
2	WGWA-5	5/18/16	0930										
3	WGWA-6	5/18/16	140930										
4	WGWA-3	5/18/16	1215										
5	WGWA-4	5/18/16	1225										
WGWC-17	WGWA-4	5/18/16		Monitoring Well - Ash Pond									
103477007	FD-01(AP)	5/18/16		Field Duplicate - Ash Pond									
8	FD-02(AP)	5/18/16											
9	WGWC-16	5/18/16	1435	Monitoring well - Ash Pond									
10	WGWC-15	5/18/16											

Matrix Key:<sup>23</sup>  
 O-Oil S-Solid SL-Sludge W-Wipe  
 SW-Surface Water GW-Ground Water  
 WW-Waste Water DW-Drinking Water

Preservative Key:<sup>24</sup>  
 H-Hydrochloric Acid N-Nitric Acid  
 S-Sulfuric Acid SH-Sodium Hydroxide  
 SB-Sodium Bisulfate P-Phosphoric Acid  
 ST-Sodium Thiosulfate L-Li U-Unpreserved

LAB USE ONLY<sup>25</sup>  
 Comments  
 BH  
 CG  
 KNS  
 KNS  
 CG  
 BH  
 BH  
 CG  
 CG  
 KNS

LAB USE ONLY: Sample Receipt Information<sup>28</sup>

Relinquished by:<sup>26</sup> [Signature] Date/Time 5/18/16 1730 3.0°C (GFL-IR-4P) ice cooler in good condition, no seal intact, pH 2  
 Received by:<sup>27</sup> [Signature] Date/Time 5-19-16 @1000 Sample collection time missing from COC for multiple samples, will be lodged in based on sample container labels.  
 Relinquished by: \_\_\_\_\_ Date/Time \_\_\_\_\_  
 Received by: \_\_\_\_\_ Date/Time \_\_\_\_\_

FedEx # 809184865652

103477006



# Sample Receipt Checklist



Client: Wansley  
 Workorder No.: 103477  
 Carrier: FEDEX

# of Samples: 12  
 Tracking No: 809484868652

Question	Answer	Comment
Radioactivity wasn't checked or is <= background as measured by a survey meter	True	
Custody seals were present on cooler	True	
Custody seals on cooler were intact	True	
Custody seals were present on sample	False	
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	3.1
COC is present	True	
COC is filled out in ink and is legible	True	Multiple mark-throughs on COC.
COC is filled out with pertinent information	True	
The field sampler's name is on the COC	True	
Sample containers have legible labels	True	
Information on the sample label agrees with information on the COC	True	
Samples are received within holding times	True	
Containers are not broken or leaking	True	
Sample collection date/times are present	False	Sample collection time for sample numbers WGWC-17 and WGWC-15 were not present on the COC. Samples were logged in based on sample collection time found on container labels.
Appropriate sample containers are used	True	
Sample bottles are completely filled	True	
Sample preservation is checked	True	
Sample preservation is acceptable	True	
There is sufficient sample volume for all requested analyses	True	
Containers requiring zero headspace have no headspace or the bubble is < 6mm (1/4 inch)	True	
Multiphasic samples are not present	True	
Samples do not require splitting or compositing	True	

Receiving Narrative:

June 9, 2016

Joju Abraham  
Southern Company Services  
Earth Sciences & Env Eng  
42 Inverness Center Parkway  
Birmingham, AL 35242

RE: Workorder: 103504 CCR - Wansley AP

Dear Joju Abraham:

The Environmental Laboratory has completed the analysis of your samples and reports the results on the attached pages. Our laboratory maintains current NELAC accreditation for those analytes listed under the scope of accreditation. Analytes not listed in this scope are currently not maintained under an accreditation program. The analytes of this report that are listed under our NELAC scope of accreditation meet all requirements of the NELAC standards, unless otherwise noted by data qualifiers. Internal clients can view the scope and effective dates of our accreditation at:

<http://environmental.southernco.com/gpc/environmental-lab/chem.html>

External clients can receive a copy of our scope of accreditation by contacting the laboratory.

All results relate only to the contents of the samples submitted. Samples will be disposed of after 30 days unless otherwise instructed. This report should only be reproduced in full with all associated records. 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.

If you have any questions or comments, contact your Program Manager:

L. Biddy

lbbiddy@southernco.com

(404) 799-2132 / 8-530-2132

Respectfully submitted,



R. S. Dickerson  
rsdicker@southernco.com  
QA/QC Specialist

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## SAMPLE SUMMARY

Workorder: 103504 CCR - Wansley AP

Lab ID	Sample ID	Analysis Request Number	Matrix	Date Collected	Date Received
103504001	FB-02(AP)	N/A	Water	5/19/2016 09:25	5/19/2016 13:00
103504002	EB-02(AP)	N/A	Water	5/19/2016 08:55	5/19/2016 13:00
103504003	WGWC-9	N/A	Water	5/19/2016 09:50	5/19/2016 13:00

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**ANALYTICAL RESULTS**

Workorder: 103504 CCR - Wansley AP

<b>Lab ID:</b>	<b>103504001</b>	<b>Date Received:</b>	<b>5/19/2016 13:00</b>
<b>Sample ID:</b>	<b>FB-02(AP)</b>	<b>Date Collected:</b>	<b>5/19/2016 09:25</b>
<b>Sample Description</b>	<b>Field Blank-Ash Pond</b>	<b>Matrix:</b>	<b>Water</b>
<b>Location</b>	<b>Wansley AP</b>		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					5/23/2016 10:50	KLW	5/24/2016 16:59	HAM	
Calcium	<0.500	mg/L	0.100	0.500	5/23/2016 10:50	KLW	5/24/2016 16:59	HAM	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
TOTAL METALS					5/26/2016 06:33	WCM	5/26/2016 12:47	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/26/2016 12:47	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	5/23/2016 11:00	KLW	5/23/2016 21:48	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 21:48	MRP	
Boron	<0.100	mg/L	0.0200	0.100	5/23/2016 11:00	KLW	5/24/2016 17:10	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:48	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:48	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 21:48	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:48	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:48	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/23/2016 11:00	KLW	5/23/2016 21:48	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 21:48	MRP	
Barium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:48	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/23/2016 11:00	KLW	5/23/2016 21:48	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 21:48	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							5/27/2016 04:58	LBB	
Sulfate	<1.00	mg/L	0.3000	1.00			5/27/2016 04:58	LBB	
Chloride	<0.2500	mg/L	0.0400	0.2500			5/27/2016 04:58	LBB	
Fluoride	<0.3000	mg/L	0.0100	0.3000			5/27/2016 04:58	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							5/23/2016 18:00	KLW	
TDS	<25	mg/L	25	25			5/23/2016 18:00	KLW	

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**ANALYTICAL RESULTS**

Workorder: 103504 CCR - Wansley AP

**Lab ID:** 103504002 **Date Received:** 5/19/2016 13:00  
**Sample ID:** EB-02(AP) **Date Collected:** 5/19/2016 08:55  
**Sample Description:** Equipment Blank-Ash Pond **Matrix:** Water  
**Location:** Wansley AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					5/23/2016 10:50	KLW	5/24/2016 17:05	HAM	
Calcium	<0.500	mg/L	0.100	0.500	5/23/2016 10:50	KLW	5/24/2016 17:05	HAM	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
TOTAL METALS					5/26/2016 06:33	WCM	5/26/2016 12:50	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/26/2016 12:50	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	5/23/2016 11:00	KLW	5/23/2016 21:53	MRP	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 21:53	MRP	
Boron	<0.100	mg/L	0.0200	0.100	5/23/2016 11:00	KLW	5/24/2016 17:16	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:53	MRP	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:53	MRP	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 21:53	MRP	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:53	MRP	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:53	MRP	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/23/2016 11:00	KLW	5/23/2016 21:53	MRP	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/23/2016 21:53	MRP	
Barium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/23/2016 21:53	MRP	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/23/2016 11:00	KLW	5/23/2016 21:53	MRP	
Lead	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/23/2016 21:53	MRP	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							5/27/2016 05:37	LBB	
Sulfate	<1.00	mg/L	0.3000	1.00			5/27/2016 05:37	LBB	
Chloride	<0.2500	mg/L	0.0400	0.2500			5/27/2016 05:37	LBB	
Fluoride	<0.3000	mg/L	0.0100	0.3000			5/27/2016 05:37	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							5/23/2016 18:00	KLW	
TDS	<25	mg/L	25	25			5/23/2016 18:00	KLW	

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**ANALYTICAL RESULTS**

Workorder: 103504 CCR - Wansley AP

**Lab ID:** 103504003 **Date Received:** 5/19/2016 13:00  
**Sample ID:** WGWC-9 **Date Collected:** 5/19/2016 09:50  
**Sample Description:** Monitoring Well-Ash Pond **Matrix:** Water  
**Location:** Wansley AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					5/23/2016 10:50	KLW	5/24/2016 17:11	HAM	
Calcium	8.53	mg/L	0.100	0.500	5/23/2016 10:50	KLW	5/24/2016 17:11	HAM	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
TOTAL METALS					5/26/2016 06:33	WCM	5/26/2016 12:53	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/26/2016 12:53	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	0.0335J	mg/L	0.0100	0.0500	5/23/2016 11:00	KLW	5/26/2016 15:41	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/26/2016 15:41	ELS	
Boron	0.314	mg/L	0.0200	0.100	5/23/2016 11:00	KLW	5/26/2016 15:41	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/26/2016 15:41	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/26/2016 15:41	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/26/2016 15:41	ELS	
Selenium	0.00228J	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/26/2016 15:41	ELS	
Molybdenum	0.00762J	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/26/2016 15:41	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/23/2016 11:00	KLW	5/26/2016 15:41	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/23/2016 11:00	KLW	5/26/2016 15:41	ELS	
Barium	<0.0100	mg/L	0.00200	0.0100	5/23/2016 11:00	KLW	5/26/2016 15:41	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/23/2016 11:00	KLW	5/26/2016 15:41	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/23/2016 11:00	KLW	5/26/2016 15:41	ELS	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							5/27/2016 06:15	LBB	
Sulfate	35.9	mg/L	0.6000	2.00			5/27/2016 11:23	LBB	
Chloride	1.46	mg/L	0.0400	0.2500			5/27/2016 06:15	LBB	
Fluoride	1.58	mg/L	0.0100	0.3000			5/27/2016 06:15	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							5/23/2016 18:00	KLW	
TDS	134	mg/L	25	25			5/23/2016 18:00	KLW	

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## ANALYTICAL RESULTS QUALIFIERS

Workorder: 103504 CCR - Wansley AP

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### PARAMETER QUALIFIERS

ND	None detected at the laboratory Method Detection Limit
MDL	Method Detection Limit
RL	Reporting Limit
J	The reported value is between the laboratory method detection limit and the laboratory reporting limit

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**QUALITY CONTROL DATA**

Workorder: 103504 CCR - Wansley AP

QC Batch:	DIGM/4320		Analysis Method:	EPA 6020B		
QC Batch Method:	EPA 3005A					
Associated Lab Samples:	103477001	103477002	103477003	103477004	103477005	103477006
	103477007	103477008	103477009	103477010	103477011	103477012
	103504001	103504002	103504003			

METHOD BLANK: 106216

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
<b>TOTAL METALS</b>				
Lithium	mg/L	<0.0500	0.0500	
Beryllium	mg/L	<0.00300	0.00300	
Boron	mg/L	<0.100	0.100	
Chromium	mg/L	<0.0100	0.0100	
Cobalt	mg/L	<0.0100	0.0100	
Arsenic	mg/L	<0.00500	0.00500	
Selenium	mg/L	<0.0100	0.0100	
Molybdenum	mg/L	<0.0100	0.0100	
Cadmium	mg/L	<0.00100	0.00100	
Antimony	mg/L	<0.00300	0.00300	
Barium	mg/L	<0.0100	0.0100	
Thallium	mg/L	<0.00100	0.00100	
Lead	mg/L	<0.00500	0.00500	

LABORATORY CONTROL SAMPLE: 106217

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
<b>TOTAL METALS</b>						
Lithium	mg/L	0.2	0.217	109	80-120	
Beryllium	mg/L	0.1	0.105	105	80-120	
Boron	mg/L	0.3	0.309	103	80-120	
Chromium	mg/L	0.1	0.108	108	80-120	
Cobalt	mg/L	0.1	0.110	110	80-120	
Arsenic	mg/L	0.1	0.106	106	80-120	
Selenium	mg/L	0.1	0.105	105	80-120	
Molybdenum	mg/L	0.1	0.106	106	80-120	
Cadmium	mg/L	0.1	0.107	107	80-120	
Antimony	mg/L	0.1	0.107	107	80-120	
Barium	mg/L	0.1	0.110	110	80-120	
Thallium	mg/L	0.1	0.0985	98.5	80-120	
Lead	mg/L	0.1	0.107	107	80-120	

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**QUALITY CONTROL DATA**

Workorder: 103504 CCR - Wansley AP

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106218                      106219                      Original: 103477009

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
<b>TOTAL METALS</b>											
Lithium	mg/L	0.00761	0.2	0.215	0.211	104	102	75-125	1.9	20	
Beryllium	mg/L	5.7e-005	0.1	0.100	0.0988	100	98.7	75-125	1.3	20	
Chromium	mg/L	0.00037	0.1	0.101	0.100	100	99.9	75-125	0.1	20	
Cobalt	mg/L	0.0069	0.1	0.106	0.105	98.9	97.8	75-125	1.1	20	
Arsenic	mg/L	0.00038	0.1	0.0996	0.101	99.2	101	75-125	1.8	20	
Selenium	mg/L	0.00735	0.1	0.105	0.110	97.9	102	75-125	4.1	20	
Molybdenum	mg/L	0.00036	0.1	0.105	0.106	105	106	75-125	0.95	20	
Cadmium	mg/L	0.00036	0.1	0.103	0.103	103	102	75-125	0.98	20	
Antimony	mg/L	0.00019	0.1	0.103	0.103	103	103	75-125	0	20	
Barium	mg/L	0.0715	0.1	0.173	0.172	102	100	75-125	2	20	
Thallium	mg/L	8.8e-005	0.1	0.0951	0.0945	95	94.4	75-125	0.63	20	
Lead	mg/L	9.2e-005	0.1	0.101	0.101	101	101	75-125	0	20	

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**QUALITY CONTROL DATA**

Workorder: 103504 CCR - Wansley AP

QC Batch:	DIGM/4323		Analysis Method:	EPA 6010D		
QC Batch Method:	EPA 3005A					
Associated Lab Samples:	103477001	103477002	103477003	103477004	103477005	103477006
	103477007	103477008	103477009	103477010	103477011	103477012
	103504001	103504002	103504003			

METHOD BLANK: 106228

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
INORGANICS				
Calcium	mg/L	<0.500	0.500	

LABORATORY CONTROL SAMPLE: 106229

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
INORGANICS						
Calcium	mg/L	5	5.53	111	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106230                      106231                      Original: 103477002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
INORGANICS											
Calcium	mg/L	1.7	5	6.41	6.52	94.2	96.4	75-125	2.3	20	

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**QUALITY CONTROL DATA**

Workorder: 103504 CCR - Wansley AP

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QC Batch:	GRAV/2875	Analysis Method:		SM 2540C		
QC Batch Method:	SM 2540C					
Associated Lab Samples:	103477004	103477005	103477006	103477007	103477008	103477009
	103477010	103477011	103477012	103504001	103504002	103504003

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METHOD BLANK: 106241

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
WET CHEMISTRY				
TDS	mg/L	<25	25	

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LABORATORY CONTROL SAMPLE: 106244

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
TDS	mg/L	241	224	92.9	90-110	

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SAMPLE DUPLICATE: 106243

Original: 103483001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
TDS	mg/L	276	249	10.3	20	

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**QUALITY CONTROL DATA**

Workorder: 103504 CCR - Wansley AP

QC Batch:	IC/3034	Analysis Method:		EPA 300		
QC Batch Method:	EPA 300					
Associated Lab Samples:	103477001	103477002	103477003	103477004	103477005	103477006
	103477007	103477008	103477009	103477010	103477011	103477012
	103504001	103504002	103504003			

METHOD BLANK: 106342

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Chloride	mg/L	<0.2500	0.2500	
Sulfate	mg/L	<1.00	1.00	
Fluoride	mg/L	<0.3000	0.3000	

LABORATORY CONTROL SAMPLE: 106343

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.5	0.5000	100	90-110	
Sulfate	mg/L	5	5.04	101	90-110	
Fluoride	mg/L	0.5	0.5310	106	90-110	

LABORATORY CONTROL SAMPLE: 106669

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	11.3	11.7	103	90-110	
Fluoride	mg/L	6.83	6.85	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106348                      106349                      Original: 103477007

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Sulfate	mg/L	0.367	10	10.5	10.5	101	101	90-110	0	10	

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**QUALITY CONTROL DATA**

Workorder: 103504 CCR - Wansley AP

QC Batch:	HGPR/1660	Analysis Method:		EPA 7470A		
QC Batch Method:	EPA 7470A					
Associated Lab Samples:	103477001	103477002	103477003	103477004	103477005	103477006
	103477007	103477008	103477009	103477010	103477011	103477012
	103504001	103504002	103504003			

METHOD BLANK: 106449

Parameter	Units	Blank Result	Reporting Limit Qualifiers
TOTAL METALS			
Mercury	mg/L	<0.000500	0.000500

LABORATORY CONTROL SAMPLE: 106445

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
TOTAL METALS					
Mercury	mg/L	0.0122	0.0123	100	80-120

LABORATORY CONTROL SAMPLE: 106450

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
TOTAL METALS					
Mercury	mg/L	0.002	0.00201	100	80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106446                      106447                      Original: 103477001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Mercury	mg/L	1.18e-00	0.002	0.00208	0.00203	103	101	80-120	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106451                      106452                      Original: 103515001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Mercury	mg/L	1.47e-00	0.002	0.00195	0.00186	97	92	80-120	5.3	20	

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**QUALITY CONTROL DATA**

Workorder: 103504 CCR - Wansley AP

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SAMPLE DUPLICATE: 106448

Original: 103477002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
TOTAL METALS					
Mercury	mg/L	<0.000500	<0.000500	0	20

SAMPLE DUPLICATE: 106453

Original: 103515002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
TOTAL METALS					
Mercury	mg/L	<0.000500	<0.000500	2.7	20

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Workorder: 103504 CCR - Wansley AP

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
103504001	FB-02(AP)	EPA 3005A	DIGM/4320	EPA 6020B	ICPM/1069
103504002	EB-02(AP)	EPA 3005A	DIGM/4320	EPA 6020B	ICPM/1069
103504003	WGWC-9	EPA 3005A	DIGM/4320	EPA 6020B	ICPM/1069
103504001	FB-02(AP)	EPA 3005A	DIGM/4323	EPA 6010D	ICP/5018
103504002	EB-02(AP)	EPA 3005A	DIGM/4323	EPA 6010D	ICP/5018
103504003	WGWC-9	EPA 3005A	DIGM/4323	EPA 6010D	ICP/5018
103504001	FB-02(AP)	SM 2540C	GRAV/2875		
103504002	EB-02(AP)	SM 2540C	GRAV/2875		
103504003	WGWC-9	SM 2540C	GRAV/2875		
103504001	FB-02(AP)	EPA 300	IC/3034		
103504002	EB-02(AP)	EPA 300	IC/3034		
103504003	WGWC-9	EPA 300	IC/3034		
103504001	FB-02(AP)	EPA 7470A	HGPR/1660	EPA 7470A	CVAA/1847
103504002	EB-02(AP)	EPA 7470A	HGPR/1660	EPA 7470A	CVAA/1847
103504003	WGWC-9	EPA 7470A	HGPR/1660	EPA 7470A	CVAA/1847

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## LABORATORY CERTIFICATIONS

Workorder: 103504 CCR - Wansley AP

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Certification Program	Certification Number
NELAC	E57554

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Georgia Power Environmental Laboratory  
 NELAP Certification #E57554  
 2480 Maner Road, BIN 39110  
 Atlanta, Georgia 30339  
 Phone: (404) 799-2100  
 Company: 8-530-2100

**ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD**

**LAB USE ONLY**

Work Order No. 103304  
 Reviewed By: [Signature]  
 Page 1 of 1

Sample Shipment Date:<sup>8</sup> 5/19/16 (Delivered by Express)  
 Sample Received Date:<sup>9</sup> 5-20-16  
 # of Business Days (Rush)    
 # of Business Days (Standard)  Standard Turnaround Time  
 (Must be cleared through Env. Lab. Prior to shipment)

Company:<sup>1</sup> Southern Company Services  
 Report To: Joju Abraham  
 Address:<sup>2</sup> 241 Ralph McGill Blvd SE B10185  
 Atlanta, GA 30308  
 Phone/Fax:<sup>3</sup> 404-506-7239  
 Contact:<sup>4</sup> Joju Abraham  
 Project Location:<sup>5</sup> Plant Wansley  
 Account Number:<sup>6</sup>  
 Special Instructions:<sup>7</sup> Wansley AP CCR GW

PRESERVATIVE <sup>20</sup>		ANALYSIS REQUESTED <sup>21</sup>		LAB USE ONLY <sup>25</sup>	
G-Grab	O-Other	HNO3	Ice	HNO3	N
Sample Type Key: <sup>22</sup>		Matrix Key: <sup>23</sup>		Preservative Key: <sup>24</sup>	
G-Grab O-Other C-Composite		O-ON S-Solid SL-Sludge WH-Whole		H-Hydrochloric Acid N-Nitric Acid	
S-Sulfuric Acid		SH-Sodium Hydroxide		SS-Sodium Bisulfite P-Phosphoric Acid	
ST-Sodium Thiosulfate I-Ice U-Unpreserved				LAB USE ONLY <sup>25</sup>	
				Comments	

LAB USE ONLY <sup>13</sup> LAB ID	Sample Number <sup>14</sup>	Collection <sup>15</sup>		Sample Description <sup>16</sup>	Sample Type	Matrix	No. of Containers	Metals app. III & IV EPA 6020 & EPA 7470	Cl, F, SO4 EPA 300 TDS SM2540C	Radium 226 & 228 Ga Tech
		Date	Time							
<u>103304001</u>	<u>FB-02(AP)</u>	<u>5/19/16</u>	<u>0925</u>	<u>Field Blank - Ash Pond</u>	<u>G</u>	<u>W*</u>	<u>3</u>	<u>X</u>	<u>X</u>	<u>X</u>
<u>2</u>	<u>EB-02(AP)</u>	<u>5/19/16</u>	<u>0855</u>	<u>Equipment Blanks - Ash Pond</u>	<u>G</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>
<u>3</u>	<u>WGLWC-G</u>	<u>5/19/16</u>	<u>0950</u>	<u>Monitoring well - Ash Pond</u>	<u>G</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>

Authorization to subcontract analysis will be assumed acceptable by customer unless stated otherwise.

Signature: [Signature]  
 Sampled By: Kristen Jurinko, Chris Gargan, Ben Hodges

LAB USE ONLY: Sample Receipt Information <sup>28</sup>

Relinquished by:<sup>26</sup> Tavis MaA.nc2 Date/Time 5-19-16/1255  
 Received by:<sup>27</sup> [Signature] Date/Time 5/19/16 @ 13:00  
 Relinquished by:  
 Received by: [Signature] Date/Time

5-8°C (GPEK 18-4P), cooler in good condition, Seal, PHL 2, Hand

AMJ 5/19/16

# Sample Receipt Checklist

**Client:** Wansley  
**Workorder No.:** 103504  
**Carrier:** HAND

**# of Samples:** 3  
**Tracking No:**

Question	Answer	Comment
Radioactivity wasn't checked or is <= background as measured by a survey meter	True	
Custody seals were present on cooler	True	
Custody seals on cooler were intact	True	
Custody seals were present on sample	False	
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	5.8
COC is present	True	
COC is filled out in ink and is legible	True	
COC is filled out with pertinent information	True	
The field sampler's name is on the COC	True	
Sample containers have legible labels	True	
Information on the sample label agrees with information on the COC	True	
Samples are received within holding times	True	
Containers are not broken or leaking	True	
Sample collection date/times are present	True	
Appropriate sample containers are used	True	
Sample bottles are completely filled	True	
Sample preservation is checked	True	
Sample preservation is acceptable	True	
There is sufficient sample volume for all requested analyses	True	
Containers requiring zero headspace have no headspace or the bubble is < 6mm (1/4 inch)	True	
Multiphasic samples are not present	True	
Samples do not require splitting or compositing	True	

**Receiving Narrative:**

No non-conformance noticed.

June 9, 2016

Joju Abraham  
Southern Company Services  
Earth Sciences & Env Eng  
42 Inverness Center Parkway  
Birmingham, AL 35242

RE: Workorder: 103520 CCR - Wansley AP

Dear Joju Abraham:

The Environmental Laboratory has completed the analysis of your samples and reports the results on the attached pages. Our laboratory maintains current NELAC accreditation for those analytes listed under the scope of accreditation. Analytes not listed in this scope are currently not maintained under an accreditation program. The analytes of this report that are listed under our NELAC scope of accreditation meet all requirements of the NELAC standards, unless otherwise noted by data qualifiers. Internal clients can view the scope and effective dates of our accreditation at:

<http://environmental.southernco.com/gpc/environmental-lab/chem.html>

External clients can receive a copy of our scope of accreditation by contacting the laboratory.

All results relate only to the contents of the samples submitted. Samples will be disposed of after 30 days unless otherwise instructed. This report should only be reproduced in full with all associated records. 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.

If you have any questions or comments, contact your Program Manager:

L. Biddy

lbiddy@southernco.com

(404) 799-2132 / 8-530-2132

Respectfully submitted,



R. S. Dickerson  
rsdicker@southernco.com  
QA/QC Specialist

Report ID: 103520 - 5037905  
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## SAMPLE SUMMARY

Workorder: 103520 CCR - Wansley AP

Lab ID	Sample ID	Analysis Request Number	Matrix	Date Collected	Date Received
103520001	WGWC-13	N/A	Water	5/19/2016 11:15	5/20/2016 13:30
103520002	WGWC-14	N/A	Water	5/19/2016 11:25	5/20/2016 13:30
103520003	WGWC-11	N/A	Water	5/19/2016 14:05	5/20/2016 13:30
103520004	WGWC-12	N/A	Water	5/19/2016 14:35	5/20/2016 13:30
103520005	WGWC-8	N/A	Water	5/19/2016 12:05	5/20/2016 13:30

Report ID: 103520 - 5037905  
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**ANALYTICAL RESULTS**

Workorder: 103520 CCR - Wansley AP

**Lab ID:** 103520001 **Date Received:** 5/20/2016 13:30  
**Sample ID:** WGWC-13 **Date Collected:** 5/19/2016 11:15  
**Sample Description:** Monitoring Well-Ash Pond **Matrix:** Water  
**Location:** Wansley AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					6/1/2016 10:30	KLW	6/6/2016 20:10	MRP	
Calcium	11.4	mg/L	0.100	0.500	6/1/2016 10:30	KLW	6/6/2016 20:10	MRP	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
TOTAL METALS					5/26/2016 06:33	WCM	5/27/2016 09:20	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 09:20	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	5/25/2016 10:15	KLW	5/26/2016 20:04	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/25/2016 10:15	KLW	5/26/2016 20:04	ELS	
Boron	0.0252J	mg/L	0.0200	0.100	5/25/2016 10:15	KLW	5/26/2016 20:04	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:04	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:04	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/25/2016 10:15	KLW	5/26/2016 20:04	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:04	ELS	
Molybdenum	0.00491J	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:04	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/25/2016 10:15	KLW	5/26/2016 20:04	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/25/2016 10:15	KLW	5/26/2016 20:04	ELS	
Barium	0.0550	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:04	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/25/2016 10:15	KLW	5/26/2016 20:04	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/25/2016 10:15	KLW	5/26/2016 20:04	ELS	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							5/31/2016 17:24	LBB	
Sulfate	19.2	mg/L	0.3000	1.00			5/31/2016 17:24	LBB	
Chloride	2.26	mg/L	0.0400	0.2500			5/31/2016 17:24	LBB	
Fluoride	0.3840	mg/L	0.0100	0.3000			5/31/2016 17:24	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							5/24/2016 18:35	KLW	
TDS	127	mg/L	25	25			5/24/2016 18:35	KLW	

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**ANALYTICAL RESULTS**

Workorder: 103520 CCR - Wansley AP

**Lab ID:** 103520002 **Date Received:** 5/20/2016 13:30  
**Sample ID:** WGWC-14 **Date Collected:** 5/19/2016 11:25  
**Sample Description:** Monitoring Well-Ash Pond **Matrix:** Water  
**Location:** Wansley AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
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Analysis Desc: EPA 6010D Preparation Method: EPA 3005A  
 Analytical Method: EPA 6010D

INORGANICS					6/1/2016 10:30	KLW	6/6/2016 20:16	MRP	
Calcium	10.5	mg/L	0.100	0.500	6/1/2016 10:30	KLW	6/6/2016 20:16	MRP	

Analysis Desc: EPA 7470A Preparation Method: EPA 7470A  
 Analytical Method: EPA 7470A

TOTAL METALS					5/26/2016 06:33	WCM	5/27/2016 09:23	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 09:23	WCM	

Analysis Desc: EPA 6020B Preparation Method: EPA 3005A  
 Analytical Method: EPA 6020B

Lithium	<0.0500	mg/L	0.0100	0.0500	5/25/2016 10:15	KLW	5/26/2016 20:29	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/25/2016 10:15	KLW	5/26/2016 20:29	ELS	
Boron	0.153	mg/L	0.0200	0.100	5/25/2016 10:15	KLW	5/26/2016 20:29	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:29	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:29	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/25/2016 10:15	KLW	5/26/2016 20:29	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:29	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:29	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/25/2016 10:15	KLW	5/26/2016 20:29	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/25/2016 10:15	KLW	5/26/2016 20:29	ELS	
Barium	0.222	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:29	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/25/2016 10:15	KLW	5/26/2016 20:29	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/25/2016 10:15	KLW	5/26/2016 20:29	ELS	

Analysis Desc: EPA 300 Analytical Method: EPA 300

TOTAL NUTRIENTS							5/31/2016 18:03	LBB	
Sulfate	12.4	mg/L	0.3000	1.00			5/31/2016 18:03	LBB	
Chloride	9.44	mg/L	0.2000	1.25			6/1/2016 12:36	LBB	
Fluoride	0.0520J	mg/L	0.0100	0.3000			5/31/2016 18:03	LBB	

Analysis Desc: SM 2540C Analytical Method: SM 2540C

WET CHEMISTRY							5/24/2016 18:35	KLW	
TDS	112	mg/L	25	25			5/24/2016 18:35	KLW	

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**ANALYTICAL RESULTS**

Workorder: 103520 CCR - Wansley AP

**Lab ID:** 103520003 **Date Received:** 5/20/2016 13:30  
**Sample ID:** WGWC-11 **Date Collected:** 5/19/2016 14:05  
**Sample Description:** Monitoring Well-Ash Pond **Matrix:** Water  
**Location:** Wansley AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					6/1/2016 10:30	KLW	6/6/2016 20:22	MRP	
Calcium	1.95	mg/L	0.100	0.500	6/1/2016 10:30	KLW	6/6/2016 20:22	MRP	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
TOTAL METALS					5/26/2016 06:33	WCM	5/27/2016 09:25	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 09:25	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	5/25/2016 10:15	KLW	5/26/2016 20:45	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/25/2016 10:15	KLW	5/26/2016 20:45	ELS	
Boron	<0.100	mg/L	0.0200	0.100	5/25/2016 10:15	KLW	5/26/2016 20:45	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:45	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:45	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/25/2016 10:15	KLW	5/26/2016 20:45	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:45	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:45	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/25/2016 10:15	KLW	5/26/2016 20:45	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/25/2016 10:15	KLW	5/26/2016 20:45	ELS	
Barium	0.0310	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:45	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/25/2016 10:15	KLW	5/26/2016 20:45	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/25/2016 10:15	KLW	5/26/2016 20:45	ELS	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							5/31/2016 18:41	LBB	
Sulfate	1.83	mg/L	0.3000	1.00			5/31/2016 18:41	LBB	
Chloride	3.21	mg/L	0.0800	0.5000			6/1/2016 13:15	LBB	
Fluoride	0.0390J	mg/L	0.0100	0.3000			5/31/2016 18:41	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							5/24/2016 18:35	KLW	
TDS	39	mg/L	25	25			5/24/2016 18:35	KLW	

Report ID: 103520 - 5037905  
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**ANALYTICAL RESULTS**

Workorder: 103520 CCR - Wansley AP

**Lab ID:** 103520004 **Date Received:** 5/20/2016 13:30  
**Sample ID:** WGWC-12 **Date Collected:** 5/19/2016 14:35  
**Sample Description:** Monitoring Well-Ash Pond **Matrix:** Water  
**Location:** Wansley AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					6/1/2016 10:30	KLW	6/7/2016 11:14	MRP	
Calcium	15.8	mg/L	0.100	0.500	6/1/2016 10:30	KLW	6/7/2016 11:14	MRP	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
TOTAL METALS					5/26/2016 06:33	WCM	5/27/2016 09:28	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 09:28	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	5/25/2016 10:15	KLW	5/26/2016 20:50	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/25/2016 10:15	KLW	5/26/2016 20:50	ELS	
Boron	<0.100	mg/L	0.0200	0.100	5/25/2016 10:15	KLW	5/26/2016 20:50	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:50	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:50	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/25/2016 10:15	KLW	5/26/2016 20:50	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:50	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:50	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/25/2016 10:15	KLW	5/26/2016 20:50	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/25/2016 10:15	KLW	5/26/2016 20:50	ELS	
Barium	0.0214	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:50	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/25/2016 10:15	KLW	5/26/2016 20:50	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/25/2016 10:15	KLW	5/26/2016 20:50	ELS	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							5/31/2016 19:19	LBB	
Sulfate	15.8	mg/L	0.3000	1.00			5/31/2016 19:19	LBB	
Chloride	3.80	mg/L	0.0800	0.5000			6/1/2016 13:53	LBB	
Fluoride	0.1200J	mg/L	0.0100	0.3000			5/31/2016 19:19	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							5/24/2016 18:35	KLW	
TDS	101	mg/L	25	25			5/24/2016 18:35	KLW	

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**ANALYTICAL RESULTS**

Workorder: 103520 CCR - Wansley AP

**Lab ID:** 103520005 **Date Received:** 5/20/2016 13:30  
**Sample ID:** WGWC-8 **Date Collected:** 5/19/2016 12:05  
**Sample Description:** Monitoring Well-Ash Pond **Matrix:** Water  
**Location:** Wansley AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
------------	---------	-------	-----	----	----------	----	----------	----	------

Analysis Desc: EPA 6010D Preparation Method: EPA 3005A  
 Analytical Method: EPA 6010D

INORGANICS					6/1/2016 10:30	KLW	6/6/2016 21:10	MRP	
Calcium	31.4	mg/L	0.100	0.500	6/1/2016 10:30	KLW	6/6/2016 21:10	MRP	

Analysis Desc: EPA 7470A Preparation Method: EPA 7470A  
 Analytical Method: EPA 7470A

TOTAL METALS					5/26/2016 06:33	WCM	5/27/2016 09:31	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/26/2016 06:33	WCM	5/27/2016 09:31	WCM	

Analysis Desc: EPA 6020B Preparation Method: EPA 3005A  
 Analytical Method: EPA 6020B

Lithium	0.0215J	mg/L	0.0100	0.0500	5/25/2016 10:15	KLW	5/26/2016 20:55	ELS	
Beryllium	0.00102J	mg/L	0.000600	0.00300	5/25/2016 10:15	KLW	5/26/2016 20:55	ELS	
Boron	1.42	mg/L	0.0400	0.200	5/25/2016 10:15	KLW	5/27/2016 17:01	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:55	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:55	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/25/2016 10:15	KLW	5/26/2016 20:55	ELS	
Selenium	0.00518J	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:55	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:55	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/25/2016 10:15	KLW	5/26/2016 20:55	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/25/2016 10:15	KLW	5/26/2016 20:55	ELS	
Barium	0.00260J	mg/L	0.00200	0.0100	5/25/2016 10:15	KLW	5/26/2016 20:55	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/25/2016 10:15	KLW	5/26/2016 20:55	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/25/2016 10:15	KLW	5/26/2016 20:55	ELS	

Analysis Desc: EPA 300 Analytical Method: EPA 300

TOTAL NUTRIENTS							5/31/2016 19:58	LBB	
Sulfate	146	mg/L	3.00	10.0			6/1/2016 14:32	LBB	
Chloride	17.5	mg/L	0.4000	2.50			6/1/2016 14:32	LBB	
Fluoride	0.3040	mg/L	0.0100	0.3000			5/31/2016 19:58	LBB	

Analysis Desc: SM 2540C Analytical Method: SM 2540C

WET CHEMISTRY							5/24/2016 18:35	KLW	
TDS	311	mg/L	25	25			5/24/2016 18:35	KLW	

Report ID: 103520 - 5037905  
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## ANALYTICAL RESULTS QUALIFIERS

Workorder: 103520 CCR - Wansley AP

---

### PARAMETER QUALIFIERS

ND	None detected at the laboratory Method Detection Limit
MDL	Method Detection Limit
RL	Reporting Limit
J	The reported value is between the laboratory method detection limit and the laboratory reporting limit

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**QUALITY CONTROL DATA**

Workorder: 103520 CCR - Wansley AP

---

QC Batch: GRAV/2876 Analysis Method: SM 2540C  
 QC Batch Method: SM 2540C  
 Associated Lab Samples: 103520001 103520002 103520003 103520004 103520005

---

METHOD BLANK: 106278

Parameter	Units	Blank Result	Reporting Limit Qualifiers
WET CHEMISTRY			
TDS	mg/L	<25	25

---

LABORATORY CONTROL SAMPLE: 106281

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
TDS	mg/L	241	240	99.6	90-110

---

SAMPLE DUPLICATE: 106279 Original: 103515002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
TDS	mg/L	93	100	7.3	20

---

SAMPLE DUPLICATE: 106280 Original: 103520001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
TDS	mg/L	127	128	0.78	20

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**QUALITY CONTROL DATA**

Workorder: 103520 CCR - Wansley AP

---

QC Batch: DIGM/4327 Analysis Method: EPA 6010D  
 QC Batch Method: EPA 3005A  
 Associated Lab Samples: 103520001 103520002 103520003 103520004 103520005

---

METHOD BLANK: 106300

Parameter	Units	Blank Result	Reporting Limit Qualifiers
INORGANICS			
Calcium	mg/L	<0.500	0.500

---

LABORATORY CONTROL SAMPLE: 106301

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
INORGANICS					
Calcium	mg/L	5	5.15	103	80-120

---

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106302 106303 Original: 103520004

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
INORGANICS											
Calcium	mg/L	15.8	5	21.1	21.2	106	109	75-125	2.8	20	

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**QUALITY CONTROL DATA**

Workorder: 103520 CCR - Wansley AP

QC Batch: DIGM/4328 Analysis Method: EPA 6020B  
 QC Batch Method: EPA 3005A  
 Associated Lab Samples: 103520001 103520002 103520003 103520004 103520005

METHOD BLANK: 106304

Parameter	Units	Blank Result	Reporting Limit Qualifiers
<b>TOTAL METALS</b>			
Lithium	mg/L	<0.0500	0.0500
Beryllium	mg/L	<0.00300	0.00300
Boron	mg/L	<0.100	0.100
Chromium	mg/L	<0.0100	0.0100
Cobalt	mg/L	<0.0100	0.0100
Arsenic	mg/L	<0.00500	0.00500
Selenium	mg/L	<0.0100	0.0100
Molybdenum	mg/L	<0.0100	0.0100
Cadmium	mg/L	<0.00100	0.00100
Antimony	mg/L	<0.00300	0.00300
Barium	mg/L	<0.0100	0.0100
Thallium	mg/L	<0.00100	0.00100
Lead	mg/L	<0.00500	0.00500

LABORATORY CONTROL SAMPLE: 106305

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
<b>TOTAL METALS</b>					
Lithium	mg/L	0.2	0.199	99.5	80-120
Beryllium	mg/L	0.1	0.111	111	80-120
Boron	mg/L	0.3	0.299	99.6	80-120
Chromium	mg/L	0.1	0.118	118	80-120
Cobalt	mg/L	0.1	0.118	118	80-120
Arsenic	mg/L	0.1	0.116	116	80-120
Selenium	mg/L	0.1	0.120	120	80-120
Molybdenum	mg/L	0.1	0.116	116	80-120
Cadmium	mg/L	0.1	0.114	114	80-120
Antimony	mg/L	0.1	0.116	116	80-120
Barium	mg/L	0.1	0.118	118	80-120
Thallium	mg/L	0.1	0.104	104	80-120
Lead	mg/L	0.1	0.109	109	80-120

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**QUALITY CONTROL DATA**

Workorder: 103520 CCR - Wansley AP

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106306 106307 Original: 103520002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
<b>TOTAL METALS</b>											
Lithium	mg/L	0.00139	0.2	0.191	0.187	94.9	92.7	75-125	2.3	20	
Beryllium	mg/L	4.3e-005	0.1	0.0946	0.0928	94.6	92.7	75-125	2	20	
Boron	mg/L	0.153	0.3	0.433	0.432	93.3	93.1	75-125	0.21	20	
Chromium	mg/L	0.00026	0.1	0.103	0.103	103	103	75-125	0	20	
Cobalt	mg/L	0.00086	0.1	0.105	0.103	104	103	75-125	0.97	20	
Arsenic	mg/L	8.3e-005	0.1	0.103	0.104	103	104	75-125	0.97	20	
Selenium	mg/L	0.00017	0.1	0.105	0.103	105	103	75-125	1.9	20	
Molybdenum	mg/L	0.00028	0.1	0.106	0.105	106	104	75-125	1.9	20	
Cadmium	mg/L	6.9e-005	0.1	0.102	0.101	102	101	75-125	0.99	20	
Antimony	mg/L	0.00010	0.1	0.103	0.103	103	103	75-125	0	20	
Barium	mg/L	0.222	0.1	0.335	0.333	113	111	75-125	1.8	20	
Thallium	mg/L	3.5e-005	0.1	0.0915	0.0911	91.5	91.1	75-125	0.44	20	
Lead	mg/L	4.2e-005	0.1	0.0961	0.0954	96.1	95.4	75-125	0.73	20	

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**QUALITY CONTROL DATA**

Workorder: 103520 CCR - Wansley AP

QC Batch: IC/3036 Analysis Method: EPA 300  
 QC Batch Method: EPA 300  
 Associated Lab Samples: 103520001 103520002 103520003 103520004 103520005

METHOD BLANK: 106368

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Chloride	mg/L	<0.2500	0.2500	
Sulfate	mg/L	<1.00	1.00	
Fluoride	mg/L	<0.3000	0.3000	

METHOD BLANK: 106378

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Chloride	mg/L	<0.2500	0.2500	
Sulfate	mg/L	<1.00	1.00	
Fluoride	mg/L	<0.3000	0.3000	

METHOD BLANK: 106634

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Chloride	mg/L	<0.2500	0.2500	
Sulfate	mg/L	<1.00	1.00	

METHOD BLANK: 106670

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Chloride	mg/L	<0.2500	0.2500	
Sulfate	mg/L	<1.00	1.00	

LABORATORY CONTROL SAMPLE: 106369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.5	0.5010	100	90-110	
Sulfate	mg/L	5	5.02	100	90-110	
Fluoride	mg/L	0.5	0.5320	106	90-110	

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**QUALITY CONTROL DATA**

Workorder: 103520 CCR - Wansley AP

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106384                      106385                      Original: 103532005

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Sulfate	mg/L	0	10	10.2	10.2	102	102	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106628                      106629                      Original: 103532003

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Chloride	mg/L	1.4	1	2.37	2.37	96.5	96.7	90-110	1	10	

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**QUALITY CONTROL DATA**

Workorder: 103520 CCR - Wansley AP

QC Batch: HGPR/1661 Analysis Method: EPA 7470A  
 QC Batch Method: EPA 7470A  
 Associated Lab Samples: 103520001 103520002 103520003 103520004 103520005

METHOD BLANK: 106460

Parameter	Units	Blank Result	Reporting Limit Qualifiers
TOTAL METALS			
Mercury	mg/L	<0.000500	0.000500

LABORATORY CONTROL SAMPLE: 106456

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
TOTAL METALS					
Mercury	mg/L	0.0122	0.0123	101	80-120

LABORATORY CONTROL SAMPLE: 106461

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
TOTAL METALS					
Mercury	mg/L	0.002	0.00194	97	80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 106462 106463 Original: 103518001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Mercury	mg/L	0	0.002	0.00196	0.00196	98	98	80-120	0	20	

SAMPLE DUPLICATE: 106464 Original: 103518002

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
TOTAL METALS					
Mercury	mg/L	<0.000500	<0.000500	0	20

Report ID: 103520 - 5037905  
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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Workorder: 103520 CCR - Wansley AP

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
103520001	WGWC-13	SM 2540C	GRAV/2876		
103520002	WGWC-14	SM 2540C	GRAV/2876		
103520003	WGWC-11	SM 2540C	GRAV/2876		
103520004	WGWC-12	SM 2540C	GRAV/2876		
103520005	WGWC-8	SM 2540C	GRAV/2876		
103520001	WGWC-13	EPA 3005A	DIGM/4327	EPA 6010D	ICP/5023
103520002	WGWC-14	EPA 3005A	DIGM/4327	EPA 6010D	ICP/5023
103520003	WGWC-11	EPA 3005A	DIGM/4327	EPA 6010D	ICP/5023
103520004	WGWC-12	EPA 3005A	DIGM/4327	EPA 6010D	ICP/5023
103520005	WGWC-8	EPA 3005A	DIGM/4327	EPA 6010D	ICP/5023
103520001	WGWC-13	EPA 3005A	DIGM/4328	EPA 6020B	ICPM/1074
103520002	WGWC-14	EPA 3005A	DIGM/4328	EPA 6020B	ICPM/1074
103520003	WGWC-11	EPA 3005A	DIGM/4328	EPA 6020B	ICPM/1074
103520004	WGWC-12	EPA 3005A	DIGM/4328	EPA 6020B	ICPM/1074
103520005	WGWC-8	EPA 3005A	DIGM/4328	EPA 6020B	ICPM/1074
103520001	WGWC-13	EPA 300	IC/3036		
103520002	WGWC-14	EPA 300	IC/3036		
103520003	WGWC-11	EPA 300	IC/3036		
103520004	WGWC-12	EPA 300	IC/3036		
103520005	WGWC-8	EPA 300	IC/3036		
103520001	WGWC-13	EPA 7470A	HGPR/1661	EPA 7470A	CVAA/1845
103520002	WGWC-14	EPA 7470A	HGPR/1661	EPA 7470A	CVAA/1845
103520003	WGWC-11	EPA 7470A	HGPR/1661	EPA 7470A	CVAA/1845
103520004	WGWC-12	EPA 7470A	HGPR/1661	EPA 7470A	CVAA/1845
103520005	WGWC-8	EPA 7470A	HGPR/1661	EPA 7470A	CVAA/1845

Report ID: 103520 - 5037905  
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## LABORATORY CERTIFICATIONS

Workorder: 103520 CCR - Wansley AP

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Certification Program	Certification Number
NELAC	E57554

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Georgia Power Environmental Laboratory  
 NELAP Certification #E57554  
 2480 Maner Road, BIN 39110  
 Atlanta, Georgia 30339  
 Phone: (404) 799-2100  
 Company: 8-530-2100

**ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD**

**LAB USE ONLY**

Work Order No. 103520  
 Reviewed By: [Signature]  
 Date: 5-20-16

Page 1 of 1

Sample Shipment Date: 5/20/16  Standard Turnaround Time  
 Sample Received Date: 5/20/16  Folder

Company: Southern Company Services  
 Report To: Joju Abraham  
 Address: 241 Ralph McGill Blvd SE B10185  
Atlanta, GA 30308  
 Phone/Fax: 404-506-7239  
 Contact: Joju Abraham  
 Project Location: Plant Wansley  
 Account Number: \_\_\_\_\_  
 Special: \_\_\_\_\_  
 Instructions: Wansley AP CCR GW

Sampled By: Kristen Jurinko, Chris Gurguin, Ben Hodges  
 # of Business Days (Rush)   
 (Must be cleared through Env. Lab. Prior to shipment)

LAB USE ONLY LAB ID	Sample Number <sup>14</sup>	Collection <sup>15</sup>		Sample Description <sup>16</sup>	Sample Type	Matrix	No. of Containers	ANALYSIS REQUESTED <sup>21</sup>		PRESERVATIVE <sup>20</sup>			Sample Type Key: 22 G-Grab O-Other C-Composite
		Date	Time					HNO3	Ice	HNO3	N	G-Grab	
103520001	WGWC-13	5/19/16	1115	Monitoring well - Ashford	GW	3		X					
↓	WGWC-14	5/19/16	1125	↓	↓	↓		↓					
↓	WGWC-11	5/19/16	1405	↓	↓	↓		↓					
↓	WGWC-12	5/19/16	1435	↓	↓	↓		↓					
↓	WGWC-8	5/19/16	1205	Monitoring well - Ashford	GW	3		X					
103520005	WGWC-8	5/19/16	1205	Monitoring well - Ashford	GW	3		X					

Matrix Key: 23  
 S-Solid SL-Sludge WW-WW  
 SW-Surface Water CW-Cond Water  
 WH-Waste Water DW-Drinking Water

Preservative Key: 24  
 H-Hydrochloric Acid N-Nitric Acid  
 S-Sulfuric Acid SH-Sodium Hydroxide  
 SBS-Sodium Bisulfate P-Phosphoric Acid  
 ST-Sodium Thiosulfate I-Ice U-Unpreserved

LAB USE ONLY<sup>25</sup>  
 Comments  
 CG  
 CG  
 BH  
 BH  
 BH

LAB USE ONLY: Sample Receipt Information<sup>28</sup>

Relinquished by: [Signature] Date/Time 5/20/16 1330  
 Received by: [Signature] Date/Time 5-20-16 @ 1330  
 Relinquished by: \_\_\_\_\_ Date/Time \_\_\_\_\_  
 Received by: \_\_\_\_\_ Date/Time \_\_\_\_\_



# Sample Receipt Checklist

Client: Wansley  
Workorder No.: 103520  
Carrier: HAND

# of Samples: 5  
Tracking No:

Question	Answer	Comment
Radioactivity wasn't checked or is <= background as measured by a survey meter	True	
Custody seals were present on cooler	False	
Custody seals were present on sample	False	
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	5.4
COC is present	True	
COC is filled out in ink and is legible	True	Multiple mark through present on COC.
COC is filled out with pertinent information	True	
The field sampler's name is on the COC	True	
Sample containers have legible labels	True	
Information on the sample label agrees with information on the COC	True	
Samples are received within holding times	True	
Containers are not broken or leaking	True	
Sample collection date/times are present	True	
Appropriate sample containers are used	True	
Sample bottles are completely filled	True	
Sample preservation is checked	True	
Sample preservation is acceptable	True	
There is sufficient sample volume for all requested analyses	True	
Containers requiring zero headspace have no headspace or the bubble is < 6mm (1/4 inch)	True	
Multiphasic samples are not present	True	
Samples do not require splitting or compositing	True	

Receiving Narrative:



# 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: 400-123943-1

Client Project/Site: CCR Plant Wansley

For:

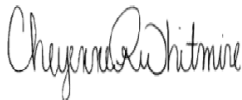
Georgia Power - Environmental Lab

Bin 39110

2480 Maner Road

Smyrna, Georgia 30080

Attn: Jolynn Locke



Authorized for release by:

8/10/2016 1:48:42 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

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

### LINKS

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results through

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

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

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

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# Case Narrative

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

---

**Job ID: 400-123943-1**

---

**Laboratory: TestAmerica Pensacola**

## Narrative

---

### Job Narrative 400-123943-1

#### RAD

Method(s) PrecSep\_0: Insufficient sample volume was available to perform a sample duplicate (DUP) associated with Ra228 analytical batch 160-260212.

Method(s) PrecSep\_0: Radium-228 prep batch 160-263225: Insufficient sample volume was available to perform a sample duplicate (DUP) for sample WGWC-9 (400-123943-44). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Insufficient sample volume was available to perform a sample duplicate (DUP) associated with Ra226 analytical batch 160-260210. A lab control sample/lab control sample duplicate (LCS/LCSD) was prepared instead.

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# Method Summary

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

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

**Protocol References:**

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

**Laboratory References:**

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



# Sample Summary

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-123943-1	GWC-17	Water	05/25/16 15:17	07/05/16 10:01
400-123943-2	FB-04(LF)	Water	05/26/16 12:05	07/05/16 10:01
400-123943-3	GWA-2	Water	05/24/16 10:15	07/05/16 10:01
400-123943-4	GWC-6	Water	05/24/16 10:09	07/05/16 10:01
400-123943-5	GWC-32	Water	05/24/16 09:55	07/05/16 10:01
400-123943-6	GWC-27	Water	05/24/16 12:45	07/05/16 10:01
400-123943-7	GWC-7	Water	05/24/16 12:24	07/05/16 10:01
400-123943-8	GWC-9	Water	05/24/16 14:15	07/05/16 10:01
400-123943-9	GWC-8	Water	05/24/16 13:40	07/05/16 10:01
400-123943-10	FB-02(LF)	Water	05/24/16 15:05	07/05/16 10:01
400-123943-11	EB-02(LF)	Water	05/24/16 15:10	07/05/16 10:01
400-123943-12	WGWA-7	Water	05/18/16 09:45	07/05/16 10:01
400-123943-13	WGWA-5	Water	05/18/16 09:30	07/05/16 10:01
400-123943-14	WGWA-6	Water	05/18/16 09:30	07/05/16 10:01
400-123943-15	WGWA-3	Water	05/18/16 12:15	07/05/16 10:01
400-123943-16	WGWA-4	Water	05/18/16 12:25	07/05/16 10:01
400-123943-17	WGWC-17	Water	05/18/16 12:35	07/05/16 10:01
400-123943-18	FD-01(AP)	Water	05/18/16 00:00	07/05/16 10:01
400-123943-19	FD-02(AP)	Water	05/18/16 00:00	07/05/16 10:01
400-123943-20	WGWC-16	Water	05/18/16 14:35	07/05/16 10:01
400-123943-21	WGWC-15	Water	05/18/16 14:55	07/05/16 10:01
400-123943-22	WGWC-10	Water	05/18/16 15:25	07/05/16 10:01
400-123943-23	EB-01(AP)	Water	05/18/16 15:45	07/05/16 10:01
400-123943-24	GWC-18	Water	05/26/16 11:00	07/05/16 10:01
400-123943-25	GWC-19	Water	05/26/16 12:52	07/05/16 10:01
400-123943-26	GWC-20	Water	05/26/16 10:40	07/05/16 10:01
400-123943-27	GWC-21	Water	05/26/16 13:10	07/05/16 10:01
400-123943-28	GWC-22	Water	05/26/16 11:25	07/05/16 10:01
400-123943-29	EB-04(LF)	Water	05/26/16 11:55	07/05/16 10:01
400-123943-30	FD-04(LF)	Water	05/26/16 00:00	07/05/16 10:01
400-123943-31	FD-03(LF)	Water	05/26/16 00:00	07/05/16 10:01
400-123943-32	WGWA-1	Water	05/17/16 11:25	07/05/16 10:01
400-123943-33	WGWA-2	Water	05/17/16 12:00	07/05/16 10:01
400-123943-34	FB-01(AP)	Water	05/17/16 12:25	07/05/16 10:01
400-123943-35	WGWA-18	Water	05/17/16 14:10	07/05/16 10:01
400-123943-36	GWA-29	Water	05/19/16 17:10	07/05/16 10:01
400-123943-37	GWA-4	Water	05/19/16 16:05	07/05/16 10:01
400-123943-38	GWC-30	Water	05/20/16 09:30	07/05/16 10:01
400-123943-39	GWA-1	Water	05/20/16 10:10	07/05/16 10:01
400-123943-40	FB-01(LF)	Water	05/20/16 10:00	07/05/16 10:01
400-123943-41	EB-01(LF)	Water	05/20/16 10:05	07/05/16 10:01
400-123943-42	FB-02(AP)	Water	05/19/16 09:25	07/09/16 09:13
400-123943-43	EB-02(AP)	Water	05/19/16 08:55	07/09/16 09:13
400-123943-44	WGWC-9	Water	05/19/16 09:50	07/09/16 09:13
400-123943-45	GWC-34	Water	05/23/16 12:45	07/09/16 09:13
400-123943-46	FD-01(LF)	Water	05/23/16 00:00	07/09/16 09:13
400-123943-47	GWA-28	Water	05/23/16 13:30	07/09/16 09:13
400-123943-48	GWC-5	Water	05/23/16 15:45	07/09/16 09:13
400-123943-49	WGWC-13	Water	05/19/16 11:15	07/05/16 10:01
400-123943-50	WGWC-14	Water	05/19/16 11:25	07/05/16 10:01
400-123943-51	WGWC-11	Water	05/19/16 14:05	07/05/16 10:01
400-123943-52	WGWC-12	Water	05/19/16 14:35	07/05/16 10:01
400-123943-53	WGWC-8	Water	05/19/16 12:05	07/05/16 10:01

TestAmerica Pensacola

# Sample Summary

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-123943-54	GWC-23	Water	05/25/16 10:30	07/05/16 10:01
400-123943-55	GWC-25	Water	05/25/16 13:45	07/05/16 10:01
400-123943-56	GWC-26	Water	05/25/16 15:50	07/05/16 10:01
400-123943-57	FB-03(LF)	Water	05/25/16 14:30	07/05/16 10:01
400-123943-58	EB-03(LF)	Water	05/25/16 14:40	07/05/16 10:01
400-123943-59	GWC-35	Water	05/25/16 09:50	07/05/16 10:01
400-123943-60	FD-02(LF)	Water	05/25/16 00:00	07/05/16 10:01
400-123943-61	GWC-11	Water	05/25/16 10:07	07/05/16 10:01
400-123943-62	GWC-12	Water	05/25/16 13:00	07/05/16 10:01
400-123943-63	GWC-13	Water	05/25/16 12:03	07/05/16 10:01
400-123943-64	GWC-14	Water	05/25/16 12:00	07/05/16 10:01
400-123943-65	GWC-16	Water	05/25/16 13:37	07/05/16 10:01
400-123943-66	GWC-15	Water	05/25/16 14:10	07/05/16 10:01

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWC-17**

**Date Collected: 05/25/16 15:17**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-1**

**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	0.0888	U	0.113	0.113	1.00	0.188	pCi/L	07/07/16 15:59	07/30/16 15:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					07/07/16 15:59	07/30/16 15:23	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.117	U	0.251	0.252	1.00	0.430	pCi/L	07/07/16 15:59	07/28/16 16:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					07/07/16 15:59	07/28/16 16:09	1
Y Carrier	83.7		40 - 110					07/07/16 15:59	07/28/16 16:09	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.206	U	0.275	0.276	5.00	0.430	pCi/L		08/04/16 02:16	1

**Client Sample ID: FB-04(LF)**

**Date Collected: 05/26/16 12:05**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-2**

**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	0.0466	U	0.112	0.112	1.00	0.203	pCi/L	07/07/16 15:59	07/30/16 15:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	62.4		40 - 110					07/07/16 15:59	07/30/16 15:23	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.413	U	0.303	0.306	1.00	0.618	pCi/L	07/07/16 15:59	07/28/16 16:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	62.4		40 - 110					07/07/16 15:59	07/28/16 16:10	1
Y Carrier	85.6		40 - 110					07/07/16 15:59	07/28/16 16:10	1

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# Client Sample Results

Client: Georgia Power - Environmental Lab  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: FB-04(LF)**

**Lab Sample ID: 400-123943-2**

Date Collected: 05/26/16 12:05

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.366	U	0.323	0.325	5.00	0.618	pCi/L		08/04/16 02:16	1

**Client Sample ID: GWA-2**

**Lab Sample ID: 400-123943-3**

Date Collected: 05/24/16 10:15

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.184		0.123	0.124	1.00	0.171	pCi/L	07/07/16 15:59	07/30/16 15:23	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	72.1		40 - 110					07/07/16 15:59	07/30/16 15:23	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0617	U	0.343	0.343	1.00	0.617	pCi/L	07/07/16 15:59	07/28/16 16:10	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	72.1		40 - 110					07/07/16 15:59	07/28/16 16:10	1
Y Carrier	85.2		40 - 110					07/07/16 15:59	07/28/16 16:10	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.123	U	0.365	0.365	5.00	0.617	pCi/L		08/04/16 02:16	1

**Client Sample ID: GWC-6**

**Lab Sample ID: 400-123943-4**

Date Collected: 05/24/16 10:09

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.000	U	0.116	0.116	1.00	0.223	pCi/L	07/07/16 15:59	07/30/16 15:23	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	74.9		40 - 110					07/07/16 15:59	07/30/16 15:23	1

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWC-6**

**Date Collected: 05/24/16 10:09**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-4**

**Matrix: Water**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0198	U	0.265	0.265	1.00	0.481	pCi/L	07/07/16 15:59	07/28/16 16:10	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	74.9		40 - 110					07/07/16 15:59	07/28/16 16:10	1
Y Carrier	84.5		40 - 110					07/07/16 15:59	07/28/16 16:10	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0198	U	0.289	0.289	5.00	0.481	pCi/L		08/04/16 02:16	1

**Client Sample ID: GWC-32**

**Date Collected: 05/24/16 09:55**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-5**

**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	0.154		0.0998	0.101	1.00	0.133	pCi/L	07/07/16 15:59	07/30/16 15:23	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	81.8		40 - 110					07/07/16 15:59	07/30/16 15:23	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0756	U	0.317	0.317	1.00	0.552	pCi/L	07/07/16 15:59	07/28/16 16:12	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	81.8		40 - 110					07/07/16 15:59	07/28/16 16:12	1
Y Carrier	80.7		40 - 110					07/07/16 15:59	07/28/16 16:12	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.230	U	0.333	0.333	5.00	0.552	pCi/L		08/04/16 02:16	1

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# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWC-27**

**Date Collected: 05/24/16 12:45**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-6**

**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	0.371		0.144	0.148	1.00	0.154	pCi/L	07/07/16 15:59	07/30/16 15:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.5		40 - 110					07/07/16 15:59	07/30/16 15:23	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.515	U	0.343	0.346	1.00	0.532	pCi/L	07/07/16 15:59	07/28/16 16:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.5		40 - 110					07/07/16 15:59	07/28/16 16:10	1
Y Carrier	84.9		40 - 110					07/07/16 15:59	07/28/16 16:10	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.887		0.372	0.376	5.00	0.532	pCi/L		08/04/16 02:16	1

**Client Sample ID: GWC-7**

**Date Collected: 05/24/16 12:24**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-7**

**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	0.0768	U	0.107	0.108	1.00	0.182	pCi/L	07/07/16 15:59	07/30/16 15:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	68.7		40 - 110					07/07/16 15:59	07/30/16 15:24	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.765		0.374	0.381	1.00	0.549	pCi/L	07/07/16 15:59	07/28/16 16:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	68.7		40 - 110					07/07/16 15:59	07/28/16 16:10	1
Y Carrier	83.7		40 - 110					07/07/16 15:59	07/28/16 16:10	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWC-7**

Date Collected: 05/24/16 12:24

Date Received: 07/05/16 10:01

**Lab Sample ID: 400-123943-7**

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	0.842		0.389	0.396	5.00	0.549	pCi/L		08/04/16 02:16	1

**Client Sample ID: GWC-9**

Date Collected: 05/24/16 14:15

Date Received: 07/05/16 10:01

**Lab Sample ID: 400-123943-8**

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	0.271		0.140	0.142	1.00	0.181	pCi/L	07/07/16 15:59	07/30/16 15:24	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	73.8		40 - 110					07/07/16 15:59	07/30/16 15:24	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0887	U	0.296	0.296	1.00	0.515	pCi/L	07/07/16 15:59	07/28/16 16:10	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	73.8		40 - 110					07/07/16 15:59	07/28/16 16:10	1
Y Carrier	83.0		40 - 110					07/07/16 15:59	07/28/16 16:10	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.359	U	0.327	0.328	5.00	0.515	pCi/L		08/04/16 02:16	1

**Client Sample ID: GWC-8**

Date Collected: 05/24/16 13:40

Date Received: 07/05/16 10:01

**Lab Sample ID: 400-123943-9**

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	0.277		0.130	0.132	1.00	0.155	pCi/L	07/07/16 15:59	07/30/16 15:24	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	79.8		40 - 110					07/07/16 15:59	07/30/16 15:24	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWC-8**

**Date Collected: 05/24/16 13:40**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-9**

**Matrix: Water**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.772		0.334	0.341	1.00	0.480	pCi/L	07/07/16 15:59	07/28/16 16:10	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	79.8		40 - 110					07/07/16 15:59	07/28/16 16:10	1
Y Carrier	87.1		40 - 110					07/07/16 15:59	07/28/16 16:10	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.05		0.358	0.366	5.00	0.480	pCi/L		08/04/16 02:16	1

**Client Sample ID: FB-02(LF)**

**Date Collected: 05/24/16 15:05**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-10**

**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	0.0932	U	0.219	0.219	1.00	0.386	pCi/L	07/07/16 15:59	07/30/16 15:24	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	42.5		40 - 110					07/07/16 15:59	07/30/16 15:24	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.508	U	0.587	0.589	1.00	0.967	pCi/L	07/07/16 15:59	07/28/16 16:25	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	42.5		40 - 110					07/07/16 15:59	07/28/16 16:25	1
Y Carrier	84.9		40 - 110					07/07/16 15:59	07/28/16 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	0.601	U	0.627	0.629	5.00	0.967	pCi/L		08/04/16 02:16	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: EB-02(LF)**

**Lab Sample ID: 400-123943-11**

Date Collected: 05/24/16 15:10

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0746	U	0.127	0.127	1.00	0.218	pCi/L	07/07/16 15:59	07/30/16 15:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110					07/07/16 15:59	07/30/16 15:24	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.304	U	0.283	0.284	1.00	0.456	pCi/L	07/07/16 15:59	07/28/16 16:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110					07/07/16 15:59	07/28/16 16:25	1
Y Carrier	85.2		40 - 110					07/07/16 15:59	07/28/16 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	0.379	U	0.310	0.311	5.00	0.456	pCi/L		08/04/16 02:16	1

**Client Sample ID: WGWA-7**

**Lab Sample ID: 400-123943-12**

Date Collected: 05/18/16 09:45

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0756	U	0.129	0.129	1.00	0.221	pCi/L	07/07/16 15:59	07/30/16 15:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					07/07/16 15:59	07/30/16 15:24	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.193	U	0.268	0.269	1.00	0.447	pCi/L	07/07/16 15:59	07/28/16 16:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.6		40 - 110					07/07/16 15:59	07/28/16 16:25	1
Y Carrier	87.1		40 - 110					07/07/16 15:59	07/28/16 16:25	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: WGWA-7**

**Date Collected: 05/18/16 09:45**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-12**

**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	0.268	U	0.297	0.298	5.00	0.447	pCi/L		08/04/16 02:16	1

**Client Sample ID: WGWA-5**

**Date Collected: 05/18/16 09:30**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-13**

**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	0.00200	U	0.114	0.114	1.00	0.216	pCi/L	07/07/16 15:59	07/30/16 15:25	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	79.2		40 - 110					07/07/16 15:59	07/30/16 15:25	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.323	U	0.292	0.294	1.00	0.470	pCi/L	07/07/16 15:59	07/28/16 16:25	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	79.2		40 - 110					07/07/16 15:59	07/28/16 16:25	1
Y Carrier	86.4		40 - 110					07/07/16 15:59	07/28/16 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	0.325	U	0.314	0.315	5.00	0.470	pCi/L		08/04/16 02:16	1

**Client Sample ID: WGWA-6**

**Date Collected: 05/18/16 09:30**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-14**

**Matrix: Water**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>3.01</b>		0.347	0.441	1.00	0.207	pCi/L	07/07/16 15:59	07/30/16 15:25	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	92.6		40 - 110					07/07/16 15:59	07/30/16 15:25	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-123943-14**

**Date Collected: 05/18/16 09:30**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.98		0.520	0.694	1.00	0.374	pCi/L	07/07/16 15:59	07/28/16 16:25	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	92.6		40 - 110					07/07/16 15:59	07/28/16 16:25	1
Y Carrier	83.7		40 - 110					07/07/16 15:59	07/28/16 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	8.00		0.626	0.822	5.00	0.374	pCi/L		08/04/16 02:16	1

**Client Sample ID: WGWA-3**

**Lab Sample ID: 400-123943-15**

**Date Collected: 05/18/16 12:15**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.113	U	0.107	0.107	1.00	0.166	pCi/L	07/07/16 15:59	07/30/16 15:25	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	78.6		40 - 110					07/07/16 15:59	07/30/16 15:25	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0884	U	0.311	0.312	1.00	0.567	pCi/L	07/07/16 15:59	07/28/16 16:25	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	78.6		40 - 110					07/07/16 15:59	07/28/16 16:25	1
Y Carrier	81.9		40 - 110					07/07/16 15:59	07/28/16 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	0.0250	U	0.329	0.329	5.00	0.567	pCi/L		08/04/16 02:16	1

TestAmerica Pensacola



# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-123943-16**

Date Collected: 05/18/16 12:25

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.328		0.148	0.151	1.00	0.184	pCi/L	07/07/16 15:59	07/30/16 15:25	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	79.8		40 - 110					07/07/16 15:59	07/30/16 15:25	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.711		0.328	0.334	1.00	0.474	pCi/L	07/07/16 15:59	07/28/16 16:25	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	79.8		40 - 110					07/07/16 15:59	07/28/16 16:25	1
Y Carrier	85.6		40 - 110					07/07/16 15:59	07/28/16 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	1.04		0.359	0.367	5.00	0.474	pCi/L		08/04/16 02:16	1

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-123943-17**

Date Collected: 05/18/16 12:35

Matrix: Water

Date Received: 07/05/16 10:01

**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		0.117	0.119	1.00	0.150	pCi/L	07/07/16 15:59	07/30/16 15:25	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	67.2		40 - 110					07/07/16 15:59	07/30/16 15:25	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0776	U	0.313	0.313	1.00	0.574	pCi/L	07/07/16 15:59	07/28/16 16:25	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	67.2		40 - 110					07/07/16 15:59	07/28/16 16:25	1
Y Carrier	84.5		40 - 110					07/07/16 15:59	07/28/16 16:25	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: WGWC-17**

**Date Collected: 05/18/16 12:35**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-17**

**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	0.116	U	0.334	0.335	5.00	0.574	pCi/L		08/04/16 02:16	1

**Client Sample ID: FD-01(AP)**

**Date Collected: 05/18/16 00:00**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-18**

**Matrix: Water**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0463	U	0.0933	0.0934	1.00	0.165	pCi/L	07/07/16 15:59	07/30/16 16:15	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	84.6		40 - 110					07/07/16 15:59	07/30/16 16:15	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0349	U	0.240	0.240	1.00	0.438	pCi/L	07/07/16 15:59	07/28/16 16:25	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	84.6		40 - 110					07/07/16 15:59	07/28/16 16:25	1
Y Carrier	83.7		40 - 110					07/07/16 15:59	07/28/16 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	0.0114	U	0.258	0.258	5.00	0.438	pCi/L		08/04/16 02:16	1

**Client Sample ID: FD-02(AP)**

**Date Collected: 05/18/16 00:00**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-19**

**Matrix: Water**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.415</b>		0.149	0.154	1.00	0.164	pCi/L	07/07/16 15:59	07/30/16 16:15	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	86.0		40 - 110					07/07/16 15:59	07/30/16 16:15	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

## Client Sample ID: FD-02(AP)

Date Collected: 05/18/16 00:00

Date Received: 07/05/16 10:01

## Lab Sample ID: 400-123943-19

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.925		0.292	0.305	1.00	0.371	pCi/L	07/07/16 15:59	07/28/16 16:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.0		40 - 110					07/07/16 15:59	07/28/16 16:25	1
Y Carrier	86.0		40 - 110					07/07/16 15:59	07/28/16 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	1.34		0.328	0.341	5.00	0.371	pCi/L		08/04/16 02:16	1

## Client Sample ID: WGWC-16

Date Collected: 05/18/16 14:35

Date Received: 07/05/16 10:01

## Lab Sample ID: 400-123943-20

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	0.467		0.164	0.169	1.00	0.187	pCi/L	07/07/16 15:59	07/30/16 16:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					07/07/16 15:59	07/30/16 16:15	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.567		0.301	0.306	1.00	0.452	pCi/L	07/07/16 15:59	07/28/16 16:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					07/07/16 15:59	07/28/16 16:26	1
Y Carrier	85.2		40 - 110					07/07/16 15:59	07/28/16 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	1.03		0.343	0.350	5.00	0.452	pCi/L		08/04/16 02:16	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-123943-21**

Date Collected: 05/18/16 14:55

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.152		0.0847	0.0858	1.00	0.111	pCi/L	07/08/16 13:36	08/01/16 07:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					07/08/16 13:36	08/01/16 07:59	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.417	U	0.322	0.324	1.00	0.507	pCi/L	07/08/16 16:52	07/29/16 14:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					07/08/16 16:52	07/29/16 14:17	1
Y Carrier	80.0		40 - 110					07/08/16 16:52	07/29/16 14:17	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.569		0.333	0.335	5.00	0.507	pCi/L		08/04/16 02:16	1

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-123943-22**

Date Collected: 05/18/16 15:25

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0717	U	0.0940	0.0943	1.00	0.157	pCi/L	07/08/16 13:36	08/01/16 07:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.7		40 - 110					07/08/16 13:36	08/01/16 07:59	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.111	U	0.251	0.251	1.00	0.433	pCi/L	07/08/16 16:52	07/29/16 14:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.7		40 - 110					07/08/16 16:52	07/29/16 14:17	1
Y Carrier	83.4		40 - 110					07/08/16 16:52	07/29/16 14:17	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-123943-22**

Date Collected: 05/18/16 15:25

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.182	U	0.268	0.268	5.00	0.433	pCi/L		08/04/16 02:16	1

**Client Sample ID: EB-01(AP)**

**Lab Sample ID: 400-123943-23**

Date Collected: 05/18/16 15:45

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00536	U	0.0547	0.0547	1.00	0.108	pCi/L	07/08/16 13:36	08/01/16 07:59	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	90.3		40 - 110					07/08/16 13:36	08/01/16 07:59	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.206	U	0.309	0.309	1.00	0.518	pCi/L	07/08/16 16:52	07/29/16 14:17	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	90.3		40 - 110					07/08/16 16:52	07/29/16 14:17	1
Y Carrier	84.1		40 - 110					07/08/16 16:52	07/29/16 14:17	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.211	U	0.314	0.314	5.00	0.518	pCi/L		08/04/16 02:16	1

**Client Sample ID: GWC-18**

**Lab Sample ID: 400-123943-24**

Date Collected: 05/26/16 11:00

Matrix: Water

Date Received: 07/05/16 10:01

**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	0.0908	0.0910	1.00	0.151	pCi/L	07/08/16 13:36	08/01/16 07:59	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	93.4		40 - 110					07/08/16 13:36	08/01/16 07:59	1

# Client Sample Results

Client: Georgia Power - Environmental Lab  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

## Client Sample ID: GWC-18

Date Collected: 05/26/16 11:00

Date Received: 07/05/16 10:01

## Lab Sample ID: 400-123943-24

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0999	U	0.268	0.268	1.00	0.464	pCi/L	07/08/16 16:52	07/29/16 14:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.4		40 - 110					07/08/16 16:52	07/29/16 14:17	1
Y Carrier	83.4		40 - 110					07/08/16 16:52	07/29/16 14:17	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.172	U	0.283	0.283	5.00	0.464	pCi/L		08/04/16 02:16	1

## Client Sample ID: GWC-19

Date Collected: 05/26/16 12:52

Date Received: 07/05/16 10:01

## Lab Sample ID: 400-123943-25

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	0.0773	U	0.0947	0.0949	1.00	0.157	pCi/L	07/08/16 13:36	08/01/16 07:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					07/08/16 13:36	08/01/16 07:59	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.209	U	0.267	0.268	1.00	0.443	pCi/L	07/08/16 16:52	07/29/16 14:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					07/08/16 16:52	07/29/16 14:17	1
Y Carrier	86.0		40 - 110					07/08/16 16:52	07/29/16 14:17	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.286	U	0.283	0.284	5.00	0.443	pCi/L		08/04/16 02:16	1

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWC-20**

**Lab Sample ID: 400-123943-26**

Date Collected: 05/26/16 10:40

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0322	U	0.0807	0.0807	1.00	0.144	pCi/L	07/08/16 13:36	08/01/16 07:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					07/08/16 13:36	08/01/16 07:59	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0459	U	0.315	0.315	1.00	0.569	pCi/L	07/08/16 16:52	07/29/16 14:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					07/08/16 16:52	07/29/16 14:19	1
Y Carrier	75.1		40 - 110					07/08/16 16:52	07/29/16 14:19	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0138	U	0.326	0.326	5.00	0.569	pCi/L		08/04/16 02:16	1

**Client Sample ID: GWC-21**

**Lab Sample ID: 400-123943-27**

Date Collected: 05/26/16 13:10

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0164	U	0.0669	0.0669	1.00	0.124	pCi/L	07/08/16 13:36	08/01/16 08:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					07/08/16 13:36	08/01/16 08:10	1

**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	0.318	0.318	1.00	0.567	pCi/L	07/08/16 16:52	07/29/16 14:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					07/08/16 16:52	07/29/16 14:20	1
Y Carrier	77.0		40 - 110					07/08/16 16:52	07/29/16 14:20	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWC-21**

**Date Collected: 05/26/16 13:10**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-27**

**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	0.0164	U	0.325	0.325	5.00	0.567	pCi/L		08/04/16 02:16	1

**Client Sample ID: GWC-22**

**Date Collected: 05/26/16 11:25**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-28**

**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	0.0373	U	0.0785	0.0786	1.00	0.138	pCi/L	07/08/16 13:36	08/01/16 08:10	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	88.9		40 - 110					07/08/16 13:36	08/01/16 08:10	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0164	U	0.282	0.282	1.00	0.507	pCi/L	07/08/16 16:52	07/29/16 14:20	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	88.9		40 - 110					07/08/16 16:52	07/29/16 14:20	1
Y Carrier	83.0		40 - 110					07/08/16 16:52	07/29/16 14:20	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0209	U	0.293	0.293	5.00	0.507	pCi/L		08/04/16 02:16	1

**Client Sample ID: EB-04(LF)**

**Date Collected: 05/26/16 11:55**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-29**

**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	-0.0394	U	0.0681	0.0682	1.00	0.145	pCi/L	07/08/16 13:36	08/01/16 08:10	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	84.0		40 - 110					07/08/16 13:36	08/01/16 08:10	1



# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: EB-04(LF)**

**Lab Sample ID: 400-123943-29**

**Date Collected: 05/26/16 11:55**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0759	U	0.326	0.326	1.00	0.568	pCi/L	07/08/16 16:52	07/29/16 14:20	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	84.0		40 - 110					07/08/16 16:52	07/29/16 14:20	1
Y Carrier	85.2		40 - 110					07/08/16 16:52	07/29/16 14:20	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0365	U	0.333	0.333	5.00	0.568	pCi/L		08/04/16 02:16	1

**Client Sample ID: FD-04(LF)**

**Lab Sample ID: 400-123943-30**

**Date Collected: 05/26/16 00:00**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

**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	U	0.0778	0.0783	1.00	0.115	pCi/L	07/08/16 13:36	08/01/16 08:10	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	87.5		40 - 110					07/08/16 13:36	08/01/16 08:10	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.550	U	0.410	0.414	1.00	0.645	pCi/L	07/08/16 16:52	07/29/16 14:20	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	87.5		40 - 110					07/08/16 16:52	07/29/16 14:20	1
Y Carrier	65.0		40 - 110					07/08/16 16:52	07/29/16 14:20	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.653		0.418	0.421	5.00	0.645	pCi/L		08/04/16 02:16	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: FD-03(LF)**

**Lab Sample ID: 400-123943-31**

Date Collected: 05/26/16 00:00

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0337	U	0.0668	0.0669	1.00	0.118	pCi/L	07/08/16 13:36	08/01/16 08:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					07/08/16 13:36	08/01/16 08:10	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.00586	U	0.338	0.338	1.00	0.601	pCi/L	07/08/16 16:52	07/29/16 14:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					07/08/16 16:52	07/29/16 14:21	1
Y Carrier	76.6		40 - 110					07/08/16 16:52	07/29/16 14:21	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0278	U	0.345	0.345	5.00	0.601	pCi/L		08/04/16 02:16	1

**Client Sample ID: WGWA-1**

**Lab Sample ID: 400-123943-32**

Date Collected: 05/17/16 11:25

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0256	U	0.0727	0.0728	1.00	0.132	pCi/L	07/08/16 13:36	08/01/16 08:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					07/08/16 13:36	08/01/16 08:11	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0269	U	0.273	0.273	1.00	0.485	pCi/L	07/08/16 16:52	07/29/16 14:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					07/08/16 16:52	07/29/16 14:21	1
Y Carrier	87.1		40 - 110					07/08/16 16:52	07/29/16 14:21	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

## Client Sample ID: WGWA-1

Date Collected: 05/17/16 11:25

Date Received: 07/05/16 10:01

## Lab Sample ID: 400-123943-32

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	0.0525	U	0.282	0.282	5.00	0.485	pCi/L		08/04/16 02:16	1

## Client Sample ID: WGWA-2

Date Collected: 05/17/16 12:00

Date Received: 07/05/16 10:01

## Lab Sample ID: 400-123943-33

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	0.0545	U	0.0658	0.0659	1.00	0.108	pCi/L	07/08/16 13:36	08/01/16 08:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					07/08/16 13:36	08/01/16 08:11	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0754	U	0.267	0.267	1.00	0.465	pCi/L	07/08/16 16:52	07/29/16 14:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					07/08/16 16:52	07/29/16 14:21	1
Y Carrier	87.9		40 - 110					07/08/16 16:52	07/29/16 14:21	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.130	U	0.275	0.275	5.00	0.465	pCi/L		08/04/16 02:16	1

## Client Sample ID: FB-01(AP)

Date Collected: 05/17/16 12:25

Date Received: 07/05/16 10:01

## Lab Sample ID: 400-123943-34

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	0.0603	U	0.0590	0.0592	1.00	0.0918	pCi/L	07/08/16 13:36	08/01/16 08:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					07/08/16 13:36	08/01/16 08:11	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: FB-01(AP)**

**Lab Sample ID: 400-123943-34**

**Date Collected: 05/17/16 12:25**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

**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	0.264	0.265	1.00	0.504	pCi/L	07/08/16 16:52	07/29/16 14:21	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	91.7		40 - 110					07/08/16 16:52	07/29/16 14:21	1
Y Carrier	77.4		40 - 110					07/08/16 16:52	07/29/16 14:21	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0945	U	0.271	0.271	5.00	0.504	pCi/L		08/04/16 02:16	1

**Client Sample ID: WGWA-18**

**Lab Sample ID: 400-123943-35**

**Date Collected: 05/17/16 14:10**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.173		0.0798	0.0813	1.00	0.0920	pCi/L	07/08/16 13:36	08/01/16 08:11	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	91.2		40 - 110					07/08/16 13:36	08/01/16 08:11	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0114	U	0.245	0.245	1.00	0.444	pCi/L	07/08/16 16:52	07/29/16 14:21	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	91.2		40 - 110					07/08/16 16:52	07/29/16 14:21	1
Y Carrier	78.1		40 - 110					07/08/16 16:52	07/29/16 14:21	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.184	U	0.258	0.258	5.00	0.444	pCi/L		08/04/16 02:16	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWA-29**

**Lab Sample ID: 400-123943-36**

Date Collected: 05/19/16 17:10

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0305	U	0.0909	0.0909	1.00	0.162	pCi/L	07/08/16 13:36	08/01/16 08:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					07/08/16 13:36	08/01/16 08:11	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.510	U	0.397	0.399	1.00	0.628	pCi/L	07/08/16 16:52	07/29/16 14:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					07/08/16 16:52	07/29/16 14:21	1
Y Carrier	71.8		40 - 110					07/08/16 16:52	07/29/16 14:21	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.540	U	0.407	0.410	5.00	0.628	pCi/L		08/04/16 02:16	1

**Client Sample ID: GWA-4**

**Lab Sample ID: 400-123943-37**

Date Collected: 05/19/16 16:05

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.195</b>		0.0902	0.0919	1.00	0.110	pCi/L	07/08/16 13:36	08/01/16 08:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					07/08/16 13:36	08/01/16 08:11	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-228</b>	<b>0.510</b>		0.319	0.322	1.00	0.488	pCi/L	07/08/16 16:52	07/29/16 14:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					07/08/16 16:52	07/29/16 14:21	1
Y Carrier	84.9		40 - 110					07/08/16 16:52	07/29/16 14:21	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWA-4**  
**Date Collected: 05/19/16 16:05**  
**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-37**  
**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	0.706		0.331	0.335	5.00	0.488	pCi/L		08/04/16 02:16	1

**Client Sample ID: GWC-30**  
**Date Collected: 05/20/16 09:30**  
**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-38**  
**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	-0.00247	U	0.0489	0.0489	1.00	0.100	pCi/L	07/08/16 13:36	08/01/16 08:11	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	103		40 - 110					07/08/16 13:36	08/01/16 08:11	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.207	U	0.214	0.215	1.00	0.348	pCi/L	07/08/16 16:52	07/29/16 14:21	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	103		40 - 110					07/08/16 16:52	07/29/16 14:21	1
Y Carrier	87.1		40 - 110					07/08/16 16:52	07/29/16 14:21	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.205	U	0.220	0.221	5.00	0.348	pCi/L		08/04/16 02:16	1

**Client Sample ID: GWA-1**  
**Date Collected: 05/20/16 10:10**  
**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-39**  
**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	0.0213	U	0.0605	0.0606	1.00	0.111	pCi/L	07/08/16 13:36	08/01/16 08:11	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	92.6		40 - 110					07/08/16 13:36	08/01/16 08:11	1

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWA-1**  
**Date Collected: 05/20/16 10:10**  
**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-39**  
**Matrix: Water**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.193	U	0.244	0.245	1.00	0.405	pCi/L	07/08/16 16:52	07/29/16 14:22	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	92.6		40 - 110					07/08/16 16:52	07/29/16 14:22	1
Y Carrier	84.5		40 - 110					07/08/16 16:52	07/29/16 14:22	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.215	U	0.251	0.252	5.00	0.405	pCi/L		08/04/16 02:16	1

**Client Sample ID: FB-01(LF)**  
**Date Collected: 05/20/16 10:00**  
**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-40**  
**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	0.0101	U	0.0511	0.0511	1.00	0.0987	pCi/L	07/08/16 13:36	08/01/16 08:12	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	95.4		40 - 110					07/08/16 13:36	08/01/16 08:12	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.247	U	0.311	0.312	1.00	0.516	pCi/L	07/08/16 16:52	07/29/16 14:22	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	95.4		40 - 110					07/08/16 16:52	07/29/16 14:22	1
Y Carrier	68.0		40 - 110					07/08/16 16:52	07/29/16 14:22	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.257	U	0.315	0.316	5.00	0.516	pCi/L		08/04/16 02:16	1

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: EB-01(LF)**

**Lab Sample ID: 400-123943-41**

Date Collected: 05/20/16 10:05

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0129	U	0.0737	0.0737	1.00	0.144	pCi/L	07/08/16 14:24	08/01/16 15:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					07/08/16 14:24	08/01/16 15:56	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0194	U	0.340	0.340	1.00	0.605	pCi/L	07/08/16 16:55	07/29/16 16:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					07/08/16 16:55	07/29/16 16:10	1
Y Carrier	87.9		40 - 110					07/08/16 16:55	07/29/16 16:10	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.00649	U	0.348	0.348	5.00	0.605	pCi/L		08/04/16 02:16	1

**Client Sample ID: FB-02(AP)**

**Lab Sample ID: 400-123943-42**

Date Collected: 05/19/16 09:25

Matrix: Water

Date Received: 07/09/16 09:13

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0985	U	0.0960	0.0964	1.00	0.151	pCi/L	07/12/16 16:38	08/03/16 17:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					07/12/16 16:38	08/03/16 17:29	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.120	U	0.259	0.259	1.00	0.481	pCi/L	07/12/16 17:07	08/02/16 13:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					07/12/16 17:07	08/02/16 13:52	1
Y Carrier	86.7		40 - 110					07/12/16 17:07	08/02/16 13:52	1

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# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: FB-02(AP)**

**Date Collected: 05/19/16 09:25**

**Date Received: 07/09/16 09:13**

**Lab Sample ID: 400-123943-42**

**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	-0.0218	U	0.276	0.277	5.00	0.481	pCi/L		08/04/16 02:09	1

**Client Sample ID: EB-02(AP)**

**Date Collected: 05/19/16 08:55**

**Date Received: 07/09/16 09:13**

**Lab Sample ID: 400-123943-43**

**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	0.0462	U	0.116	0.116	1.00	0.206	pCi/L	07/12/16 16:38	08/03/16 17:30	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	86.3		40 - 110					07/12/16 16:38	08/03/16 17:30	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.217	U	0.269	0.269	1.00	0.511	pCi/L	07/12/16 17:07	08/02/16 13:52	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	86.3		40 - 110					07/12/16 17:07	08/02/16 13:52	1
Y Carrier	89.7		40 - 110					07/12/16 17:07	08/02/16 13:52	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	-0.171	U	0.293	0.293	5.00	0.511	pCi/L		08/04/16 02:09	1

**Client Sample ID: WGWC-9**

**Date Collected: 05/19/16 09:50**

**Date Received: 07/09/16 09:13**

**Lab Sample ID: 400-123943-44**

**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	0.132	U	0.112	0.113	1.00	0.174	pCi/L	07/12/16 16:38	08/03/16 21:48	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	88.0		40 - 110					07/12/16 16:38	08/03/16 21:48	1

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

## Client Sample ID: WGWC-9

Date Collected: 05/19/16 09:50

Date Received: 07/09/16 09:13

## Lab Sample ID: 400-123943-44

Matrix: Water

### 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	0.226	0.226	1.00	0.393	pCi/L	08/03/16 12:56	08/05/16 13:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					08/03/16 12:56	08/05/16 13:35	1
Y Carrier	86.4		40 - 110					08/03/16 12:56	08/05/16 13:35	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.209	U	0.252	0.253	5.00	0.393	pCi/L		08/09/16 09:37	1

## Client Sample ID: GWC-34

Date Collected: 05/23/16 12:45

Date Received: 07/09/16 09:13

## Lab Sample ID: 400-123943-45

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	0.0888	U	0.105	0.106	1.00	0.173	pCi/L	07/12/16 16:38	08/03/16 21:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					07/12/16 16:38	08/03/16 21:48	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.851		0.469	0.476	1.00	0.706	pCi/L	07/12/16 17:07	08/02/16 13:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					07/12/16 17:07	08/02/16 13:52	1
Y Carrier	57.2		40 - 110					07/12/16 17:07	08/02/16 13:52	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	0.939		0.481	0.487	5.00	0.706	pCi/L		08/04/16 02:09	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: FD-01(LF)**

**Lab Sample ID: 400-123943-46**

Date Collected: 05/23/16 00:00

Matrix: Water

Date Received: 07/09/16 09:13

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.124	U	0.102	0.103	1.00	0.157	pCi/L	07/12/16 16:38	08/03/16 21:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.7		40 - 110					07/12/16 16:38	08/03/16 21:48	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.594		0.286	0.291	1.00	0.419	pCi/L	07/12/16 17:07	08/02/16 13:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.7		40 - 110					07/12/16 17:07	08/02/16 13:52	1
Y Carrier	92.0		40 - 110					07/12/16 17:07	08/02/16 13:52	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	0.718		0.303	0.308	5.00	0.419	pCi/L		08/04/16 02:09	1

**Client Sample ID: GWA-28**

**Lab Sample ID: 400-123943-47**

Date Collected: 05/23/16 13:30

Matrix: Water

Date Received: 07/09/16 09:13

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.110	U	0.144	0.144	1.00	0.240	pCi/L	07/12/16 16:38	08/03/16 21:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	59.8		40 - 110					07/12/16 16:38	08/03/16 21:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0229	U	0.450	0.450	1.00	0.801	pCi/L	07/12/16 17:07	08/02/16 13:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	59.8		40 - 110					07/12/16 17:07	08/02/16 13:53	1
Y Carrier	86.4		40 - 110					07/12/16 17:07	08/02/16 13:53	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWA-28**

**Date Collected: 05/23/16 13:30**

**Date Received: 07/09/16 09:13**

**Lab Sample ID: 400-123943-47**

**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	0.0870	U	0.473	0.473	5.00	0.801	pCi/L		08/04/16 02:09	1

**Client Sample ID: GWC-5**

**Date Collected: 05/23/16 15:45**

**Date Received: 07/09/16 09:13**

**Lab Sample ID: 400-123943-48**

**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	0.0275	U	0.100	0.100	1.00	0.183	pCi/L	07/12/16 16:38	08/03/16 21:49	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	87.7		40 - 110					07/12/16 16:38	08/03/16 21:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0240	U	0.288	0.288	1.00	0.518	pCi/L	07/12/16 17:07	08/02/16 13:53	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	87.7		40 - 110					07/12/16 17:07	08/02/16 13:53	1
Y Carrier	83.7		40 - 110					07/12/16 17:07	08/02/16 13:53	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	0.00344	U	0.305	0.305	5.00	0.518	pCi/L		08/04/16 02:09	1

**Client Sample ID: WGWC-13**

**Date Collected: 05/19/16 11:15**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-49**

**Matrix: Water**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.130</b>		0.0697	0.0706	1.00	0.0853	pCi/L	07/08/16 14:24	08/01/16 15:56	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	91.5		40 - 110					07/08/16 14:24	08/01/16 15:56	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

## Client Sample ID: WGWC-13

Date Collected: 05/19/16 11:15

Date Received: 07/05/16 10:01

## Lab Sample ID: 400-123943-49

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0895	U	0.350	0.350	1.00	0.610	pCi/L	07/08/16 16:55	07/29/16 16:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		40 - 110					07/08/16 16:55	07/29/16 16:10	1
Y Carrier	87.1		40 - 110					07/08/16 16:55	07/29/16 16:10	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.219	U	0.357	0.357	5.00	0.610	pCi/L		08/04/16 02:16	1

## Client Sample ID: WGWC-14

Date Collected: 05/19/16 11:25

Date Received: 07/05/16 10:01

## Lab Sample ID: 400-123943-50

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	0.520		0.120	0.129	1.00	0.0911	pCi/L	07/08/16 14:24	08/01/16 15:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.6		40 - 110					07/08/16 14:24	08/01/16 15:56	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.562	U	0.417	0.420	1.00	0.660	pCi/L	07/08/16 16:55	07/29/16 16:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.6		40 - 110					07/08/16 16:55	07/29/16 16:11	1
Y Carrier	88.6		40 - 110					07/08/16 16:55	07/29/16 16:11	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.08		0.434	0.440	5.00	0.660	pCi/L		08/04/16 02:16	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-123943-51**

Date Collected: 05/19/16 14:05

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0310	U	0.0588	0.0588	1.00	0.104	pCi/L	07/08/16 14:24	08/01/16 15:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					07/08/16 14:24	08/01/16 15:56	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.400	U	0.360	0.362	1.00	0.578	pCi/L	07/08/16 16:55	07/29/16 16:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					07/08/16 16:55	07/29/16 16:11	1
Y Carrier	86.0		40 - 110					07/08/16 16:55	07/29/16 16:11	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.431	U	0.365	0.367	5.00	0.578	pCi/L		08/04/16 02:16	1

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-123943-52**

Date Collected: 05/19/16 14:35

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Radium-226</b>	<b>0.130</b>		0.0742	0.0751	1.00	0.0971	pCi/L	07/08/16 14:24	08/01/16 15:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					07/08/16 14:24	08/01/16 15:56	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0598	U	0.400	0.400	1.00	0.719	pCi/L	07/08/16 16:55	07/29/16 16:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					07/08/16 16:55	07/29/16 16:11	1
Y Carrier	79.6		40 - 110					07/08/16 16:55	07/29/16 16:11	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: WGWC-12**

**Date Collected: 05/19/16 14:35**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-52**

**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	0.0698	U	0.406	0.407	5.00	0.719	pCi/L		08/04/16 02:16	1

**Client Sample ID: WGWC-8**

**Date Collected: 05/19/16 12:05**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-53**

**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	0.306		0.0991	0.103	1.00	0.0978	pCi/L	07/08/16 14:24	08/01/16 15:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.9		40 - 110					07/08/16 14:24	08/01/16 15:57	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.406	U	0.437	0.438	1.00	0.715	pCi/L	07/08/16 16:55	07/29/16 16:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.9		40 - 110					07/08/16 16:55	07/29/16 16:11	1
Y Carrier	67.7		40 - 110					07/08/16 16:55	07/29/16 16:11	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.711	U	0.448	0.450	5.00	0.715	pCi/L		08/04/16 02:16	1

**Client Sample ID: GWC-23**

**Date Collected: 05/25/16 10:30**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-54**

**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	0.0409	U	0.0788	0.0789	1.00	0.137	pCi/L	07/08/16 14:24	08/01/16 15:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.3		40 - 110					07/08/16 14:24	08/01/16 15:57	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWC-23**

**Lab Sample ID: 400-123943-54**

**Date Collected: 05/25/16 10:30**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0675	U	0.341	0.341	1.00	0.619	pCi/L	07/08/16 16:55	07/29/16 16:11	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	96.3		40 - 110					07/08/16 16:55	07/29/16 16:11	1
Y Carrier	82.2		40 - 110					07/08/16 16:55	07/29/16 16:11	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0266	U	0.350	0.350	5.00	0.619	pCi/L		08/04/16 02:16	1

**Client Sample ID: GWC-25**

**Lab Sample ID: 400-123943-55**

**Date Collected: 05/25/16 13:45**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0645	U	0.0900	0.0902	1.00	0.151	pCi/L	07/08/16 14:24	08/01/16 15:57	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	91.7		40 - 110					07/08/16 14:24	08/01/16 15:57	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.205	U	0.331	0.331	1.00	0.558	pCi/L	07/08/16 16:55	07/29/16 16:12	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	91.7		40 - 110					07/08/16 16:55	07/29/16 16:12	1
Y Carrier	90.1		40 - 110					07/08/16 16:55	07/29/16 16:12	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.269	U	0.343	0.343	5.00	0.558	pCi/L		08/04/16 02:16	1

TestAmerica Pensacola



# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWC-26**

**Lab Sample ID: 400-123943-56**

Date Collected: 05/25/16 15:50

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0380	U	0.0758	0.0759	1.00	0.133	pCi/L	07/08/16 14:24	08/01/16 15:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.0		40 - 110					07/08/16 14:24	08/01/16 15:57	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.487	U	0.390	0.393	1.00	0.619	pCi/L	07/08/16 16:55	07/29/16 16:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.0		40 - 110					07/08/16 16:55	07/29/16 16:12	1
Y Carrier	83.7		40 - 110					07/08/16 16:55	07/29/16 16:12	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.525	U	0.397	0.400	5.00	0.619	pCi/L		08/04/16 02:16	1

**Client Sample ID: FB-03(LF)**

**Lab Sample ID: 400-123943-57**

Date Collected: 05/25/16 14:30

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0203	U	0.0582	0.0582	1.00	0.122	pCi/L	07/08/16 14:24	08/01/16 15:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					07/08/16 14:24	08/01/16 15:57	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0619	U	0.249	0.249	1.00	0.439	pCi/L	07/08/16 16:55	07/29/16 14:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					07/08/16 16:55	07/29/16 14:15	1
Y Carrier	87.9		40 - 110					07/08/16 16:55	07/29/16 14:15	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: FB-03(LF)**

**Date Collected: 05/25/16 14:30**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-57**

**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	0.0416	U	0.256	0.256	5.00	0.439	pCi/L		08/04/16 02:16	1

**Client Sample ID: EB-03(LF)**

**Date Collected: 05/25/16 14:40**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-58**

**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	-0.0429	U	0.0693	0.0694	1.00	0.145	pCi/L	07/08/16 14:24	08/01/16 15:57	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	90.6		40 - 110					07/08/16 14:24	08/01/16 15:57	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0432	U	0.229	0.229	1.00	0.407	pCi/L	07/08/16 16:55	07/29/16 14:15	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	90.6		40 - 110					07/08/16 16:55	07/29/16 14:15	1
Y Carrier	88.2		40 - 110					07/08/16 16:55	07/29/16 14:15	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.000318	U	0.239	0.239	5.00	0.407	pCi/L		08/04/16 02:16	1

**Client Sample ID: GWC-35**

**Date Collected: 05/25/16 09:50**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-59**

**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	0.0197	U	0.0548	0.0548	1.00	0.101	pCi/L	07/08/16 14:24	08/01/16 15:57	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	94.3		40 - 110					07/08/16 14:24	08/01/16 15:57	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWC-35**

**Date Collected: 05/25/16 09:50**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-59**

**Matrix: Water**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.211	U	0.293	0.294	1.00	0.489	pCi/L	07/08/16 16:55	07/29/16 14:15	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	94.3		40 - 110					07/08/16 16:55	07/29/16 14:15	1
Y Carrier	88.2		40 - 110					07/08/16 16:55	07/29/16 14:15	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.231	U	0.298	0.299	5.00	0.489	pCi/L		08/04/16 02:16	1

**Client Sample ID: FD-02(LF)**

**Date Collected: 05/25/16 00:00**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-60**

**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	0.0417	U	0.0657	0.0658	1.00	0.113	pCi/L	07/08/16 14:24	08/01/16 15:57	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	94.6		40 - 110					07/08/16 14:24	08/01/16 15:57	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	0.273	0.275	1.00	0.429	pCi/L	07/08/16 16:55	07/29/16 14:15	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	94.6		40 - 110					07/08/16 16:55	07/29/16 14:15	1
Y Carrier	78.1		40 - 110					07/08/16 16:55	07/29/16 14:15	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.390	U	0.281	0.283	5.00	0.429	pCi/L		08/04/16 02:16	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWC-11**

**Lab Sample ID: 400-123943-61**

Date Collected: 05/25/16 10:07

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.586		0.127	0.137	1.00	0.0822	pCi/L	07/08/16 14:24	08/01/16 15:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					07/08/16 14:24	08/01/16 15:57	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.565		0.286	0.291	1.00	0.416	pCi/L	07/08/16 16:55	07/29/16 14:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					07/08/16 16:55	07/29/16 14:15	1
Y Carrier	85.2		40 - 110					07/08/16 16:55	07/29/16 14:15	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.15		0.313	0.322	5.00	0.416	pCi/L		08/04/16 02:16	1

**Client Sample ID: GWC-12**

**Lab Sample ID: 400-123943-62**

Date Collected: 05/25/16 13:00

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.21		0.178	0.209	1.00	0.105	pCi/L	07/08/16 14:24	08/01/16 15:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.7		40 - 110					07/08/16 14:24	08/01/16 15:58	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.58		0.458	0.516	1.00	0.468	pCi/L	07/08/16 16:55	07/29/16 14:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.7		40 - 110					07/08/16 16:55	07/29/16 14:15	1
Y Carrier	78.5		40 - 110					07/08/16 16:55	07/29/16 14:15	1

TestAmerica Pensacola

# Client Sample Results

Client: Georgia Power - Environmental Lab  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWC-12**

**Date Collected: 05/25/16 13:00**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-62**

**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	3.79		0.491	0.557	5.00	0.468	pCi/L		08/04/16 02:16	1

**Client Sample ID: GWC-13**

**Date Collected: 05/25/16 12:03**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-63**

**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	0.0618	U	0.0635	0.0637	1.00	0.100	pCi/L	07/08/16 14:24	08/01/16 16:21	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	90.3		40 - 110					07/08/16 14:24	08/01/16 16:21	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.213	U	0.238	0.238	1.00	0.471	pCi/L	07/08/16 16:55	07/29/16 14:15	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	90.3		40 - 110					07/08/16 16:55	07/29/16 14:15	1
Y Carrier	81.1		40 - 110					07/08/16 16:55	07/29/16 14:15	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.151	U	0.246	0.247	5.00	0.471	pCi/L		08/04/16 02:16	1

**Client Sample ID: GWC-14**

**Date Collected: 05/25/16 12:00**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-64**

**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		0.103	0.104	1.00	0.153	pCi/L	07/08/16 14:24	08/01/16 16:21	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	90.6		40 - 110					07/08/16 14:24	08/01/16 16:21	1

# Client Sample Results

Client: Georgia Power - Environmental Lab  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWC-14**

**Lab Sample ID: 400-123943-64**

Date Collected: 05/25/16 12:00

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.553		0.309	0.313	1.00	0.462	pCi/L	07/08/16 16:55	07/29/16 14:15	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	90.6		40 - 110					07/08/16 16:55	07/29/16 14:15	1
Y Carrier	81.5		40 - 110					07/08/16 16:55	07/29/16 14:15	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.709		0.326	0.330	5.00	0.462	pCi/L		08/04/16 02:16	1

**Client Sample ID: GWC-16**

**Lab Sample ID: 400-123943-65**

Date Collected: 05/25/16 13:37

Matrix: Water

Date Received: 07/05/16 10:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0187	U	0.0603	0.0604	1.00	0.111	pCi/L	07/08/16 14:24	08/01/16 16:21	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	88.9		40 - 110					07/08/16 14:24	08/01/16 16:21	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.327	U	0.262	0.264	1.00	0.414	pCi/L	07/08/16 16:55	07/29/16 14:15	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	88.9		40 - 110					07/08/16 16:55	07/29/16 14:15	1
Y Carrier	90.5		40 - 110					07/08/16 16:55	07/29/16 14:15	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.346	U	0.269	0.271	5.00	0.414	pCi/L		08/04/16 02:16	1

# Client Sample Results

Client: Georgia Power - Environmental Lab  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWC-15**

**Lab Sample ID: 400-123943-66**

**Date Collected: 05/25/16 14:10**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0580	U	0.0654	0.0656	1.00	0.106	pCi/L	07/08/16 14:24	08/01/16 16:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.4		40 - 110					07/08/16 14:24	08/01/16 16:21	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.174	U	0.249	0.249	1.00	0.417	pCi/L	07/08/16 16:55	07/29/16 14:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.4		40 - 110					07/08/16 16:55	07/29/16 14:15	1
Y Carrier	88.2		40 - 110					07/08/16 16:55	07/29/16 14:15	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.232	U	0.257	0.258	5.00	0.417	pCi/L		08/04/16 02:16	1

# Definitions/Glossary

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

## Qualifiers

### Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
X	Carrier 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: Georgia Power - Environmental Lab  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWC-17**

**Date Collected: 05/25/16 15:17**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259596	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9315		1	262774	07/30/16 15:23	ALS	TAL SL
Total/NA	Prep	PrecSep_0			259597	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9320		1	262456	07/28/16 16:09	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: FB-04(LF)**

**Date Collected: 05/26/16 12:05**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259596	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9315		1	262774	07/30/16 15:23	ALS	TAL SL
Total/NA	Prep	PrecSep_0			259597	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9320		1	262456	07/28/16 16:10	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: GWA-2**

**Date Collected: 05/24/16 10:15**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259596	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9315		1	262774	07/30/16 15:23	ALS	TAL SL
Total/NA	Prep	PrecSep_0			259597	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9320		1	262456	07/28/16 16:10	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: GWC-6**

**Date Collected: 05/24/16 10:09**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259596	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9315		1	262774	07/30/16 15:23	ALS	TAL SL
Total/NA	Prep	PrecSep_0			259597	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9320		1	262456	07/28/16 16:10	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

# Lab Chronicle

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWC-32**

**Date Collected: 05/24/16 09:55**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-5**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259596	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9315		1	262774	07/30/16 15:23	ALS	TAL SL
Total/NA	Prep	PrecSep_0			259597	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9320		1	262456	07/28/16 16:12	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: GWC-27**

**Date Collected: 05/24/16 12:45**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-6**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259596	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9315		1	262774	07/30/16 15:23	ALS	TAL SL
Total/NA	Prep	PrecSep_0			259597	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9320		1	262456	07/28/16 16:10	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: GWC-7**

**Date Collected: 05/24/16 12:24**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-7**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259596	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9315		1	262774	07/30/16 15:24	ALS	TAL SL
Total/NA	Prep	PrecSep_0			259597	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9320		1	262456	07/28/16 16:10	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: GWC-9**

**Date Collected: 05/24/16 14:15**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-8**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259596	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9315		1	262774	07/30/16 15:24	ALS	TAL SL
Total/NA	Prep	PrecSep_0			259597	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9320		1	262456	07/28/16 16:10	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

TestAmerica Pensacola

# Lab Chronicle

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWC-8**

**Date Collected: 05/24/16 13:40**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-9**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259596	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9315		1	262774	07/30/16 15:24	ALS	TAL SL
Total/NA	Prep	PrecSep_0			259597	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9320		1	262456	07/28/16 16:10	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: FB-02(LF)**

**Date Collected: 05/24/16 15:05**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-10**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259596	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9315		1	262774	07/30/16 15:24	ALS	TAL SL
Total/NA	Prep	PrecSep_0			259597	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9320		1	262466	07/28/16 16:25	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: EB-02(LF)**

**Date Collected: 05/24/16 15:10**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-11**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259596	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9315		1	262774	07/30/16 15:24	ALS	TAL SL
Total/NA	Prep	PrecSep_0			259597	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9320		1	262466	07/28/16 16:25	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: WGWA-7**

**Date Collected: 05/18/16 09:45**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-12**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259596	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9315		1	262774	07/30/16 15:24	ALS	TAL SL
Total/NA	Prep	PrecSep_0			259597	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9320		1	262466	07/28/16 16:25	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

# Lab Chronicle

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

## Client Sample ID: WGWA-5

Lab Sample ID: 400-123943-13

Date Collected: 05/18/16 09:30

Matrix: Water

Date Received: 07/05/16 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259596	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9315		1	262774	07/30/16 15:25	ALS	TAL SL
Total/NA	Prep	PrecSep_0			259597	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9320		1	262466	07/28/16 16:25	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

## Client Sample ID: WGWA-6

Lab Sample ID: 400-123943-14

Date Collected: 05/18/16 09:30

Matrix: Water

Date Received: 07/05/16 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259596	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9315		1	262774	07/30/16 15:25	ALS	TAL SL
Total/NA	Prep	PrecSep_0			259597	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9320		1	262466	07/28/16 16:25	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

## Client Sample ID: WGWA-3

Lab Sample ID: 400-123943-15

Date Collected: 05/18/16 12:15

Matrix: Water

Date Received: 07/05/16 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259596	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9315		1	262774	07/30/16 15:25	ALS	TAL SL
Total/NA	Prep	PrecSep_0			259597	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9320		1	262466	07/28/16 16:25	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

## Client Sample ID: WGWA-4

Lab Sample ID: 400-123943-16

Date Collected: 05/18/16 12:25

Matrix: Water

Date Received: 07/05/16 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259596	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9315		1	262774	07/30/16 15:25	ALS	TAL SL
Total/NA	Prep	PrecSep_0			259597	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9320		1	262466	07/28/16 16:25	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

# Lab Chronicle

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-123943-17**

**Date Collected: 05/18/16 12:35**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259596	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9315		1	262774	07/30/16 15:25	ALS	TAL SL
Total/NA	Prep	PrecSep_0			259597	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9320		1	262466	07/28/16 16:25	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: FD-01(AP)**

**Lab Sample ID: 400-123943-18**

**Date Collected: 05/18/16 00:00**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259596	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9315		1	262784	07/30/16 16:15	ALS	TAL SL
Total/NA	Prep	PrecSep_0			259597	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9320		1	262466	07/28/16 16:25	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: FD-02(AP)**

**Lab Sample ID: 400-123943-19**

**Date Collected: 05/18/16 00:00**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259596	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9315		1	262784	07/30/16 16:15	ALS	TAL SL
Total/NA	Prep	PrecSep_0			259597	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9320		1	262466	07/28/16 16:25	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-123943-20**

**Date Collected: 05/18/16 14:35**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259596	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9315		1	262784	07/30/16 16:15	ALS	TAL SL
Total/NA	Prep	PrecSep_0			259597	07/07/16 15:59	SCB	TAL SL
Total/NA	Analysis	9320		1	262466	07/28/16 16:26	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

# Lab Chronicle

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-123943-21**

**Date Collected: 05/18/16 14:55**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259755	07/08/16 13:36	TJT	TAL SL
Total/NA	Analysis	9315		1	262856	08/01/16 07:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259780	07/08/16 16:52	CMC	TAL SL
Total/NA	Analysis	9320		1	262649	07/29/16 14:17	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-123943-22**

**Date Collected: 05/18/16 15:25**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259755	07/08/16 13:36	TJT	TAL SL
Total/NA	Analysis	9315		1	262856	08/01/16 07:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259780	07/08/16 16:52	CMC	TAL SL
Total/NA	Analysis	9320		1	262649	07/29/16 14:17	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: EB-01(AP)**

**Lab Sample ID: 400-123943-23**

**Date Collected: 05/18/16 15:45**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259755	07/08/16 13:36	TJT	TAL SL
Total/NA	Analysis	9315		1	262856	08/01/16 07:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259780	07/08/16 16:52	CMC	TAL SL
Total/NA	Analysis	9320		1	262649	07/29/16 14:17	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: GWC-18**

**Lab Sample ID: 400-123943-24**

**Date Collected: 05/26/16 11:00**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259755	07/08/16 13:36	TJT	TAL SL
Total/NA	Analysis	9315		1	262856	08/01/16 07:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259780	07/08/16 16:52	CMC	TAL SL
Total/NA	Analysis	9320		1	262649	07/29/16 14:17	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

TestAmerica Pensacola

# Lab Chronicle

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

## Client Sample ID: GWC-19

Lab Sample ID: 400-123943-25

Date Collected: 05/26/16 12:52

Matrix: Water

Date Received: 07/05/16 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259755	07/08/16 13:36	TJT	TAL SL
Total/NA	Analysis	9315		1	262856	08/01/16 07:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259780	07/08/16 16:52	CMC	TAL SL
Total/NA	Analysis	9320		1	262649	07/29/16 14:17	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

## Client Sample ID: GWC-20

Lab Sample ID: 400-123943-26

Date Collected: 05/26/16 10:40

Matrix: Water

Date Received: 07/05/16 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259755	07/08/16 13:36	TJT	TAL SL
Total/NA	Analysis	9315		1	262856	08/01/16 07:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259780	07/08/16 16:52	CMC	TAL SL
Total/NA	Analysis	9320		1	262648	07/29/16 14:19	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

## Client Sample ID: GWC-21

Lab Sample ID: 400-123943-27

Date Collected: 05/26/16 13:10

Matrix: Water

Date Received: 07/05/16 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259755	07/08/16 13:36	TJT	TAL SL
Total/NA	Analysis	9315		1	262859	08/01/16 08:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259780	07/08/16 16:52	CMC	TAL SL
Total/NA	Analysis	9320		1	262648	07/29/16 14:20	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

## Client Sample ID: GWC-22

Lab Sample ID: 400-123943-28

Date Collected: 05/26/16 11:25

Matrix: Water

Date Received: 07/05/16 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259755	07/08/16 13:36	TJT	TAL SL
Total/NA	Analysis	9315		1	262859	08/01/16 08:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259780	07/08/16 16:52	CMC	TAL SL
Total/NA	Analysis	9320		1	262648	07/29/16 14:20	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

# Lab Chronicle

Client: Georgia Power - Environmental Lab  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: EB-04(LF)**

**Lab Sample ID: 400-123943-29**

**Date Collected: 05/26/16 11:55**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259755	07/08/16 13:36	TJT	TAL SL
Total/NA	Analysis	9315		1	262859	08/01/16 08:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259780	07/08/16 16:52	CMC	TAL SL
Total/NA	Analysis	9320		1	262648	07/29/16 14:20	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: FD-04(LF)**

**Lab Sample ID: 400-123943-30**

**Date Collected: 05/26/16 00:00**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259755	07/08/16 13:36	TJT	TAL SL
Total/NA	Analysis	9315		1	262859	08/01/16 08:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259780	07/08/16 16:52	CMC	TAL SL
Total/NA	Analysis	9320		1	262648	07/29/16 14:20	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: FD-03(LF)**

**Lab Sample ID: 400-123943-31**

**Date Collected: 05/26/16 00:00**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259755	07/08/16 13:36	TJT	TAL SL
Total/NA	Analysis	9315		1	262859	08/01/16 08:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259780	07/08/16 16:52	CMC	TAL SL
Total/NA	Analysis	9320		1	262648	07/29/16 14:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: WGWA-1**

**Lab Sample ID: 400-123943-32**

**Date Collected: 05/17/16 11:25**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259755	07/08/16 13:36	TJT	TAL SL
Total/NA	Analysis	9315		1	262859	08/01/16 08:11	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259780	07/08/16 16:52	CMC	TAL SL
Total/NA	Analysis	9320		1	262648	07/29/16 14:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL



# Lab Chronicle

Client: Georgia Power - Environmental Lab  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: WGWA-2**

**Lab Sample ID: 400-123943-33**

**Date Collected: 05/17/16 12:00**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259755	07/08/16 13:36	TJT	TAL SL
Total/NA	Analysis	9315		1	262859	08/01/16 08:11	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259780	07/08/16 16:52	CMC	TAL SL
Total/NA	Analysis	9320		1	262648	07/29/16 14:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: FB-01(AP)**

**Lab Sample ID: 400-123943-34**

**Date Collected: 05/17/16 12:25**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259755	07/08/16 13:36	TJT	TAL SL
Total/NA	Analysis	9315		1	262859	08/01/16 08:11	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259780	07/08/16 16:52	CMC	TAL SL
Total/NA	Analysis	9320		1	262648	07/29/16 14:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: WGWA-18**

**Lab Sample ID: 400-123943-35**

**Date Collected: 05/17/16 14:10**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259755	07/08/16 13:36	TJT	TAL SL
Total/NA	Analysis	9315		1	262859	08/01/16 08:11	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259780	07/08/16 16:52	CMC	TAL SL
Total/NA	Analysis	9320		1	262648	07/29/16 14:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: GWA-29**

**Lab Sample ID: 400-123943-36**

**Date Collected: 05/19/16 17:10**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259755	07/08/16 13:36	TJT	TAL SL
Total/NA	Analysis	9315		1	262859	08/01/16 08:11	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259780	07/08/16 16:52	CMC	TAL SL
Total/NA	Analysis	9320		1	262648	07/29/16 14:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

# Lab Chronicle

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWA-4**

**Lab Sample ID: 400-123943-37**

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

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259755	07/08/16 13:36	TJT	TAL SL
Total/NA	Analysis	9315		1	262859	08/01/16 08:11	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259780	07/08/16 16:52	CMC	TAL SL
Total/NA	Analysis	9320		1	262648	07/29/16 14:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: GWC-30**

**Lab Sample ID: 400-123943-38**

**Date Collected: 05/20/16 09:30**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259755	07/08/16 13:36	TJT	TAL SL
Total/NA	Analysis	9315		1	262859	08/01/16 08:11	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259780	07/08/16 16:52	CMC	TAL SL
Total/NA	Analysis	9320		1	262648	07/29/16 14:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: GWA-1**

**Lab Sample ID: 400-123943-39**

**Date Collected: 05/20/16 10:10**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259755	07/08/16 13:36	TJT	TAL SL
Total/NA	Analysis	9315		1	262859	08/01/16 08:11	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259780	07/08/16 16:52	CMC	TAL SL
Total/NA	Analysis	9320		1	262648	07/29/16 14:22	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: FB-01(LF)**

**Lab Sample ID: 400-123943-40**

**Date Collected: 05/20/16 10:00**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259755	07/08/16 13:36	TJT	TAL SL
Total/NA	Analysis	9315		1	262859	08/01/16 08:12	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259780	07/08/16 16:52	CMC	TAL SL
Total/NA	Analysis	9320		1	262648	07/29/16 14:22	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

# Lab Chronicle

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: EB-01(LF)**

**Lab Sample ID: 400-123943-41**

**Date Collected: 05/20/16 10:05**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259764	07/08/16 14:24	TJT	TAL SL
Total/NA	Analysis	9315		1	262857	08/01/16 15:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259781	07/08/16 16:55	CMC	TAL SL
Total/NA	Analysis	9320		1	262632	07/29/16 16:10	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: FB-02(AP)**

**Lab Sample ID: 400-123943-42**

**Date Collected: 05/19/16 09:25**

**Matrix: Water**

**Date Received: 07/09/16 09:13**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			260210	07/12/16 16:38	MCJ	TAL SL
Total/NA	Analysis	9315		1	263351	08/03/16 17:29	RTM	TAL SL
Total/NA	Prep	PrecSep_0			260212	07/12/16 17:07	MCJ	TAL SL
Total/NA	Analysis	9320		1	263016	08/02/16 13:52	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263374	08/04/16 02:09	ALS	TAL SL

**Client Sample ID: EB-02(AP)**

**Lab Sample ID: 400-123943-43**

**Date Collected: 05/19/16 08:55**

**Matrix: Water**

**Date Received: 07/09/16 09:13**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			260210	07/12/16 16:38	MCJ	TAL SL
Total/NA	Analysis	9315		1	263351	08/03/16 17:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			260212	07/12/16 17:07	MCJ	TAL SL
Total/NA	Analysis	9320		1	263016	08/02/16 13:52	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263374	08/04/16 02:09	ALS	TAL SL

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-123943-44**

**Date Collected: 05/19/16 09:50**

**Matrix: Water**

**Date Received: 07/09/16 09:13**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			260210	07/12/16 16:38	MCJ	TAL SL
Total/NA	Analysis	9315		1	263350	08/03/16 21:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			263225	08/03/16 12:56	MCJ	TAL SL
Total/NA	Analysis	9320		1	263659	08/05/16 13:35	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	264030	08/09/16 09:37	CAH	TAL SL

TestAmerica Pensacola

# Lab Chronicle

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWC-34**

**Lab Sample ID: 400-123943-45**

**Date Collected: 05/23/16 12:45**

**Matrix: Water**

**Date Received: 07/09/16 09:13**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			260210	07/12/16 16:38	MCJ	TAL SL
Total/NA	Analysis	9315		1	263350	08/03/16 21:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			260212	07/12/16 17:07	MCJ	TAL SL
Total/NA	Analysis	9320		1	263016	08/02/16 13:52	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263374	08/04/16 02:09	ALS	TAL SL

**Client Sample ID: FD-01(LF)**

**Lab Sample ID: 400-123943-46**

**Date Collected: 05/23/16 00:00**

**Matrix: Water**

**Date Received: 07/09/16 09:13**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			260210	07/12/16 16:38	MCJ	TAL SL
Total/NA	Analysis	9315		1	263350	08/03/16 21:48	RTM	TAL SL
Total/NA	Prep	PrecSep_0			260212	07/12/16 17:07	MCJ	TAL SL
Total/NA	Analysis	9320		1	263016	08/02/16 13:52	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263374	08/04/16 02:09	ALS	TAL SL

**Client Sample ID: GWA-28**

**Lab Sample ID: 400-123943-47**

**Date Collected: 05/23/16 13:30**

**Matrix: Water**

**Date Received: 07/09/16 09:13**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			260210	07/12/16 16:38	MCJ	TAL SL
Total/NA	Analysis	9315		1	263350	08/03/16 21:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			260212	07/12/16 17:07	MCJ	TAL SL
Total/NA	Analysis	9320		1	263016	08/02/16 13:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263374	08/04/16 02:09	ALS	TAL SL

**Client Sample ID: GWC-5**

**Lab Sample ID: 400-123943-48**

**Date Collected: 05/23/16 15:45**

**Matrix: Water**

**Date Received: 07/09/16 09:13**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			260210	07/12/16 16:38	MCJ	TAL SL
Total/NA	Analysis	9315		1	263350	08/03/16 21:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			260212	07/12/16 17:07	MCJ	TAL SL
Total/NA	Analysis	9320		1	263016	08/02/16 13:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263374	08/04/16 02:09	ALS	TAL SL

# Lab Chronicle

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-123943-49**

**Date Collected: 05/19/16 11:15**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259764	07/08/16 14:24	TJT	TAL SL
Total/NA	Analysis	9315		1	262857	08/01/16 15:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259781	07/08/16 16:55	CMC	TAL SL
Total/NA	Analysis	9320		1	262632	07/29/16 16:10	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: WGWC-14**

**Lab Sample ID: 400-123943-50**

**Date Collected: 05/19/16 11:25**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259764	07/08/16 14:24	TJT	TAL SL
Total/NA	Analysis	9315		1	262857	08/01/16 15:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259781	07/08/16 16:55	CMC	TAL SL
Total/NA	Analysis	9320		1	262632	07/29/16 16:11	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-123943-51**

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

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259764	07/08/16 14:24	TJT	TAL SL
Total/NA	Analysis	9315		1	262857	08/01/16 15:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259781	07/08/16 16:55	CMC	TAL SL
Total/NA	Analysis	9320		1	262632	07/29/16 16:11	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-123943-52**

**Date Collected: 05/19/16 14:35**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259764	07/08/16 14:24	TJT	TAL SL
Total/NA	Analysis	9315		1	262857	08/01/16 15:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259781	07/08/16 16:55	CMC	TAL SL
Total/NA	Analysis	9320		1	262632	07/29/16 16:11	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

# Lab Chronicle

Client: Georgia Power - Environmental Lab  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-123943-53**

**Date Collected: 05/19/16 12:05**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259764	07/08/16 14:24	TJT	TAL SL
Total/NA	Analysis	9315		1	262857	08/01/16 15:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259781	07/08/16 16:55	CMC	TAL SL
Total/NA	Analysis	9320		1	262632	07/29/16 16:11	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: GWC-23**

**Lab Sample ID: 400-123943-54**

**Date Collected: 05/25/16 10:30**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259764	07/08/16 14:24	TJT	TAL SL
Total/NA	Analysis	9315		1	262857	08/01/16 15:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259781	07/08/16 16:55	CMC	TAL SL
Total/NA	Analysis	9320		1	262632	07/29/16 16:11	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: GWC-25**

**Lab Sample ID: 400-123943-55**

**Date Collected: 05/25/16 13:45**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259764	07/08/16 14:24	TJT	TAL SL
Total/NA	Analysis	9315		1	262857	08/01/16 15:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259781	07/08/16 16:55	CMC	TAL SL
Total/NA	Analysis	9320		1	262632	07/29/16 16:12	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: GWC-26**

**Lab Sample ID: 400-123943-56**

**Date Collected: 05/25/16 15:50**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259764	07/08/16 14:24	TJT	TAL SL
Total/NA	Analysis	9315		1	262857	08/01/16 15:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259781	07/08/16 16:55	CMC	TAL SL
Total/NA	Analysis	9320		1	262632	07/29/16 16:12	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

# Lab Chronicle

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: FB-03(LF)**

**Lab Sample ID: 400-123943-57**

**Date Collected: 05/25/16 14:30**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259764	07/08/16 14:24	TJT	TAL SL
Total/NA	Analysis	9315		1	262857	08/01/16 15:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259781	07/08/16 16:55	CMC	TAL SL
Total/NA	Analysis	9320		1	262649	07/29/16 14:15	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: EB-03(LF)**

**Lab Sample ID: 400-123943-58**

**Date Collected: 05/25/16 14:40**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259764	07/08/16 14:24	TJT	TAL SL
Total/NA	Analysis	9315		1	262857	08/01/16 15:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259781	07/08/16 16:55	CMC	TAL SL
Total/NA	Analysis	9320		1	262649	07/29/16 14:15	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: GWC-35**

**Lab Sample ID: 400-123943-59**

**Date Collected: 05/25/16 09:50**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259764	07/08/16 14:24	TJT	TAL SL
Total/NA	Analysis	9315		1	262857	08/01/16 15:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259781	07/08/16 16:55	CMC	TAL SL
Total/NA	Analysis	9320		1	262649	07/29/16 14:15	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: FD-02(LF)**

**Lab Sample ID: 400-123943-60**

**Date Collected: 05/25/16 00:00**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259764	07/08/16 14:24	TJT	TAL SL
Total/NA	Analysis	9315		1	262857	08/01/16 15:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259781	07/08/16 16:55	CMC	TAL SL
Total/NA	Analysis	9320		1	262649	07/29/16 14:15	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

TestAmerica Pensacola

# Lab Chronicle

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWC-11**

**Lab Sample ID: 400-123943-61**

**Date Collected: 05/25/16 10:07**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259764	07/08/16 14:24	TJT	TAL SL
Total/NA	Analysis	9315		1	262857	08/01/16 15:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259781	07/08/16 16:55	CMC	TAL SL
Total/NA	Analysis	9320		1	262649	07/29/16 14:15	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: GWC-12**

**Lab Sample ID: 400-123943-62**

**Date Collected: 05/25/16 13:00**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259764	07/08/16 14:24	TJT	TAL SL
Total/NA	Analysis	9315		1	262859	08/01/16 15:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259781	07/08/16 16:55	CMC	TAL SL
Total/NA	Analysis	9320		1	262649	07/29/16 14:15	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: GWC-13**

**Lab Sample ID: 400-123943-63**

**Date Collected: 05/25/16 12:03**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259764	07/08/16 14:24	TJT	TAL SL
Total/NA	Analysis	9315		1	262856	08/01/16 16:21	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259781	07/08/16 16:55	CMC	TAL SL
Total/NA	Analysis	9320		1	262649	07/29/16 14:15	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: GWC-14**

**Lab Sample ID: 400-123943-64**

**Date Collected: 05/25/16 12:00**

**Matrix: Water**

**Date Received: 07/05/16 10:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259764	07/08/16 14:24	TJT	TAL SL
Total/NA	Analysis	9315		1	262856	08/01/16 16:21	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259781	07/08/16 16:55	CMC	TAL SL
Total/NA	Analysis	9320		1	262649	07/29/16 14:15	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL



# Lab Chronicle

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

**Client Sample ID: GWC-16**

**Date Collected: 05/25/16 13:37**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-65**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259764	07/08/16 14:24	TJT	TAL SL
Total/NA	Analysis	9315		1	262856	08/01/16 16:21	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259781	07/08/16 16:55	CMC	TAL SL
Total/NA	Analysis	9320		1	262649	07/29/16 14:15	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	ALS	TAL SL

**Client Sample ID: GWC-15**

**Date Collected: 05/25/16 14:10**

**Date Received: 07/05/16 10:01**

**Lab Sample ID: 400-123943-66**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259764	07/08/16 14:24	TJT	TAL SL
Total/NA	Analysis	9315		1	262856	08/01/16 16:21	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259781	07/08/16 16:55	CMC	TAL SL
Total/NA	Analysis	9320		1	262649	07/29/16 14:15	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263375	08/04/16 02:16	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: Georgia Power - Environmental Lab  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

## Rad

### Prep Batch: 259596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123943-1	GWC-17	Total/NA	Water	PrecSep-21	
400-123943-2	FB-04(LF)	Total/NA	Water	PrecSep-21	
400-123943-3	GWA-2	Total/NA	Water	PrecSep-21	
400-123943-4	GWC-6	Total/NA	Water	PrecSep-21	
400-123943-5	GWC-32	Total/NA	Water	PrecSep-21	
400-123943-6	GWC-27	Total/NA	Water	PrecSep-21	
400-123943-7	GWC-7	Total/NA	Water	PrecSep-21	
400-123943-8	GWC-9	Total/NA	Water	PrecSep-21	
400-123943-9	GWC-8	Total/NA	Water	PrecSep-21	
400-123943-10	FB-02(LF)	Total/NA	Water	PrecSep-21	
400-123943-11	EB-02(LF)	Total/NA	Water	PrecSep-21	
400-123943-12	WGWA-7	Total/NA	Water	PrecSep-21	
400-123943-13	WGWA-5	Total/NA	Water	PrecSep-21	
400-123943-14	WGWA-6	Total/NA	Water	PrecSep-21	
400-123943-15	WGWA-3	Total/NA	Water	PrecSep-21	
400-123943-16	WGWA-4	Total/NA	Water	PrecSep-21	
400-123943-17	WGWC-17	Total/NA	Water	PrecSep-21	
400-123943-18	FD-01(AP)	Total/NA	Water	PrecSep-21	
400-123943-19	FD-02(AP)	Total/NA	Water	PrecSep-21	
400-123943-20	WGWC-16	Total/NA	Water	PrecSep-21	
MB 160-259596/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-259596/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-123943-10 DU	FB-02(LF)	Total/NA	Water	PrecSep-21	

### Prep Batch: 259597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123943-1	GWC-17	Total/NA	Water	PrecSep_0	
400-123943-2	FB-04(LF)	Total/NA	Water	PrecSep_0	
400-123943-3	GWA-2	Total/NA	Water	PrecSep_0	
400-123943-4	GWC-6	Total/NA	Water	PrecSep_0	
400-123943-5	GWC-32	Total/NA	Water	PrecSep_0	
400-123943-6	GWC-27	Total/NA	Water	PrecSep_0	
400-123943-7	GWC-7	Total/NA	Water	PrecSep_0	
400-123943-8	GWC-9	Total/NA	Water	PrecSep_0	
400-123943-9	GWC-8	Total/NA	Water	PrecSep_0	
400-123943-10	FB-02(LF)	Total/NA	Water	PrecSep_0	
400-123943-11	EB-02(LF)	Total/NA	Water	PrecSep_0	
400-123943-12	WGWA-7	Total/NA	Water	PrecSep_0	
400-123943-13	WGWA-5	Total/NA	Water	PrecSep_0	
400-123943-14	WGWA-6	Total/NA	Water	PrecSep_0	
400-123943-15	WGWA-3	Total/NA	Water	PrecSep_0	
400-123943-16	WGWA-4	Total/NA	Water	PrecSep_0	
400-123943-17	WGWC-17	Total/NA	Water	PrecSep_0	
400-123943-18	FD-01(AP)	Total/NA	Water	PrecSep_0	
400-123943-19	FD-02(AP)	Total/NA	Water	PrecSep_0	
400-123943-20	WGWC-16	Total/NA	Water	PrecSep_0	
MB 160-259597/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-259597/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-123943-10 DU	FB-02(LF)	Total/NA	Water	PrecSep_0	

TestAmerica Pensacola

# QC Association Summary

Client: Georgia Power - Environmental Lab  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

## Rad (Continued)

### Prep Batch: 259755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123943-21	WGWC-15	Total/NA	Water	PrecSep-21	
400-123943-22	WGWC-10	Total/NA	Water	PrecSep-21	
400-123943-23	EB-01(AP)	Total/NA	Water	PrecSep-21	
400-123943-24	GWC-18	Total/NA	Water	PrecSep-21	
400-123943-25	GWC-19	Total/NA	Water	PrecSep-21	
400-123943-26	GWC-20	Total/NA	Water	PrecSep-21	
400-123943-27	GWC-21	Total/NA	Water	PrecSep-21	
400-123943-28	GWC-22	Total/NA	Water	PrecSep-21	
400-123943-29	EB-04(LF)	Total/NA	Water	PrecSep-21	
400-123943-30	FD-04(LF)	Total/NA	Water	PrecSep-21	
400-123943-31	FD-03(LF)	Total/NA	Water	PrecSep-21	
400-123943-32	WGWA-1	Total/NA	Water	PrecSep-21	
400-123943-33	WGWA-2	Total/NA	Water	PrecSep-21	
400-123943-34	FB-01(AP)	Total/NA	Water	PrecSep-21	
400-123943-35	WGWA-18	Total/NA	Water	PrecSep-21	
400-123943-36	GWA-29	Total/NA	Water	PrecSep-21	
400-123943-37	GWA-4	Total/NA	Water	PrecSep-21	
400-123943-38	GWC-30	Total/NA	Water	PrecSep-21	
400-123943-39	GWA-1	Total/NA	Water	PrecSep-21	
400-123943-40	FB-01(LF)	Total/NA	Water	PrecSep-21	
MB 160-259755/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-259755/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-123943-25 DU	GWC-19	Total/NA	Water	PrecSep-21	

### Prep Batch: 259764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123943-41	EB-01(LF)	Total/NA	Water	PrecSep-21	
400-123943-49	WGWC-13	Total/NA	Water	PrecSep-21	
400-123943-50	WGWC-14	Total/NA	Water	PrecSep-21	
400-123943-51	WGWC-11	Total/NA	Water	PrecSep-21	
400-123943-52	WGWC-12	Total/NA	Water	PrecSep-21	
400-123943-53	WGWC-8	Total/NA	Water	PrecSep-21	
400-123943-54	GWC-23	Total/NA	Water	PrecSep-21	
400-123943-55	GWC-25	Total/NA	Water	PrecSep-21	
400-123943-56	GWC-26	Total/NA	Water	PrecSep-21	
400-123943-57	FB-03(LF)	Total/NA	Water	PrecSep-21	
400-123943-58	EB-03(LF)	Total/NA	Water	PrecSep-21	
400-123943-59	GWC-35	Total/NA	Water	PrecSep-21	
400-123943-60	FD-02(LF)	Total/NA	Water	PrecSep-21	
400-123943-61	GWC-11	Total/NA	Water	PrecSep-21	
400-123943-62	GWC-12	Total/NA	Water	PrecSep-21	
400-123943-63	GWC-13	Total/NA	Water	PrecSep-21	
400-123943-64	GWC-14	Total/NA	Water	PrecSep-21	
400-123943-65	GWC-16	Total/NA	Water	PrecSep-21	
400-123943-66	GWC-15	Total/NA	Water	PrecSep-21	
MB 160-259764/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-259764/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-123943-52 DU	WGWC-12	Total/NA	Water	PrecSep-21	

TestAmerica Pensacola

# QC Association Summary

Client: Georgia Power - Environmental Lab  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

## Rad (Continued)

### Prep Batch: 259780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123943-21	WGWC-15	Total/NA	Water	PrecSep_0	
400-123943-22	WGWC-10	Total/NA	Water	PrecSep_0	
400-123943-23	EB-01(AP)	Total/NA	Water	PrecSep_0	
400-123943-24	GWC-18	Total/NA	Water	PrecSep_0	
400-123943-25	GWC-19	Total/NA	Water	PrecSep_0	
400-123943-26	GWC-20	Total/NA	Water	PrecSep_0	
400-123943-27	GWC-21	Total/NA	Water	PrecSep_0	
400-123943-28	GWC-22	Total/NA	Water	PrecSep_0	
400-123943-29	EB-04(LF)	Total/NA	Water	PrecSep_0	
400-123943-30	FD-04(LF)	Total/NA	Water	PrecSep_0	
400-123943-31	FD-03(LF)	Total/NA	Water	PrecSep_0	
400-123943-32	WGWA-1	Total/NA	Water	PrecSep_0	
400-123943-33	WGWA-2	Total/NA	Water	PrecSep_0	
400-123943-34	FB-01(AP)	Total/NA	Water	PrecSep_0	
400-123943-35	WGWA-18	Total/NA	Water	PrecSep_0	
400-123943-36	GWA-29	Total/NA	Water	PrecSep_0	
400-123943-37	GWA-4	Total/NA	Water	PrecSep_0	
400-123943-38	GWC-30	Total/NA	Water	PrecSep_0	
400-123943-39	GWA-1	Total/NA	Water	PrecSep_0	
400-123943-40	FB-01(LF)	Total/NA	Water	PrecSep_0	
MB 160-259780/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-259780/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-123943-25 DU	GWC-19	Total/NA	Water	PrecSep_0	

### Prep Batch: 259781

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123943-41	EB-01(LF)	Total/NA	Water	PrecSep_0	
400-123943-49	WGWC-13	Total/NA	Water	PrecSep_0	
400-123943-50	WGWC-14	Total/NA	Water	PrecSep_0	
400-123943-51	WGWC-11	Total/NA	Water	PrecSep_0	
400-123943-52	WGWC-12	Total/NA	Water	PrecSep_0	
400-123943-53	WGWC-8	Total/NA	Water	PrecSep_0	
400-123943-54	GWC-23	Total/NA	Water	PrecSep_0	
400-123943-55	GWC-25	Total/NA	Water	PrecSep_0	
400-123943-56	GWC-26	Total/NA	Water	PrecSep_0	
400-123943-57	FB-03(LF)	Total/NA	Water	PrecSep_0	
400-123943-58	EB-03(LF)	Total/NA	Water	PrecSep_0	
400-123943-59	GWC-35	Total/NA	Water	PrecSep_0	
400-123943-60	FD-02(LF)	Total/NA	Water	PrecSep_0	
400-123943-61	GWC-11	Total/NA	Water	PrecSep_0	
400-123943-62	GWC-12	Total/NA	Water	PrecSep_0	
400-123943-63	GWC-13	Total/NA	Water	PrecSep_0	
400-123943-64	GWC-14	Total/NA	Water	PrecSep_0	
400-123943-65	GWC-16	Total/NA	Water	PrecSep_0	
400-123943-66	GWC-15	Total/NA	Water	PrecSep_0	
MB 160-259781/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-259781/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-123943-52 DU	WGWC-12	Total/NA	Water	PrecSep_0	

# QC Association Summary

Client: Georgia Power - Environmental Lab  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

## Rad (Continued)

### Prep Batch: 260210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123943-42	FB-02(AP)	Total/NA	Water	PrecSep-21	
400-123943-43	EB-02(AP)	Total/NA	Water	PrecSep-21	
400-123943-44	WGWC-9	Total/NA	Water	PrecSep-21	
400-123943-45	GWC-34	Total/NA	Water	PrecSep-21	
400-123943-46	FD-01(LF)	Total/NA	Water	PrecSep-21	
400-123943-47	GWA-28	Total/NA	Water	PrecSep-21	
400-123943-48	GWC-5	Total/NA	Water	PrecSep-21	
MB 160-260210/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-260210/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-260210/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 260212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123943-42	FB-02(AP)	Total/NA	Water	PrecSep_0	
400-123943-43	EB-02(AP)	Total/NA	Water	PrecSep_0	
400-123943-45	GWC-34	Total/NA	Water	PrecSep_0	
400-123943-46	FD-01(LF)	Total/NA	Water	PrecSep_0	
400-123943-47	GWA-28	Total/NA	Water	PrecSep_0	
400-123943-48	GWC-5	Total/NA	Water	PrecSep_0	
MB 160-260212/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-260212/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-260212/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

### Prep Batch: 263225

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123943-44	WGWC-9	Total/NA	Water	PrecSep_0	
MB 160-263225/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-263225/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-263225/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

# QC Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

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

**Lab Sample ID: MB 160-259596/1-A**  
**Matrix: Water**  
**Analysis Batch: 262774**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 259596**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.03380	U	0.0974	0.0974	1.00	0.177	pCi/L	07/07/16 15:59	07/30/16 15:22	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		Prepared	Analyzed					
Ba Carrier	83.8		40 - 110	07/07/16 15:59	07/30/16 15:22	1				

**Lab Sample ID: LCS 160-259596/2-A**  
**Matrix: Water**  
**Analysis Batch: 262774**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 259596**

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.2	12.24		1.28	1.00	0.135	pCi/L	110	68 - 137
Carrier	LCS LCS		Limits			Prepared	Analyzed	Dil Fac	
Ba Carrier	%Yield	Qualifier		Prepared	Analyzed				
Ba Carrier	97.4		40 - 110	07/07/16 15:59	07/30/16 15:22	1			

**Lab Sample ID: 400-123943-10 DU**  
**Matrix: Water**  
**Analysis Batch: 262774**

**Client Sample ID: FB-02(LF)**  
**Prep Type: Total/NA**  
**Prep Batch: 259596**

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.0932	U	-0.01054	U	0.0805	1.00	0.169	pCi/L	0.35	1
Carrier	DU DU		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		Prepared	Analyzed					
Ba Carrier	74.1		40 - 110	07/07/16 15:59	07/30/16 15:22	1				

**Lab Sample ID: MB 160-259755/1-A**  
**Matrix: Water**  
**Analysis Batch: 262856**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 259755**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.07753	U	0.0684	0.0688	1.00	0.104	pCi/L	07/08/16 13:36	08/01/16 07:58	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		Prepared	Analyzed					
Ba Carrier	92.3		40 - 110	07/08/16 13:36	08/01/16 07:58	1				

**Lab Sample ID: LCS 160-259755/2-A**  
**Matrix: Water**  
**Analysis Batch: 262856**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 259755**

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.2	13.75		1.38	1.00	0.0972	pCi/L	123	68 - 137

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# QC Sample Results

Client: Georgia Power - Environmental Lab  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

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

**Lab Sample ID: LCS 160-259755/2-A**  
**Matrix: Water**  
**Analysis Batch: 262856**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 259755**

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	94.6		40 - 110

**Lab Sample ID: 400-123943-25 DU**  
**Matrix: Water**  
**Analysis Batch: 262856**

**Client Sample ID: GWC-19**  
**Prep Type: Total/NA**  
**Prep Batch: 259755**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.0773	U	0.1307		0.0836	1.00	0.114	pCi/L	0.30	1

	DU	DU	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	87.5		40 - 110

**Lab Sample ID: MB 160-259764/1-A**  
**Matrix: Water**  
**Analysis Batch: 262857**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 259764**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.04062	U	0.0381	0.0382	1.00	0.102	pCi/L	07/08/16 14:24	08/01/16 15:56	1

	MB	MB	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	88.3		40 - 110

	Prepared	Analyzed	Dil Fac
Ba Carrier	07/08/16 14:24	08/01/16 15:56	1

**Lab Sample ID: LCS 160-259764/2-A**  
**Matrix: Water**  
**Analysis Batch: 262857**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 259764**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	11.2	12.48		1.26	1.00	0.134	pCi/L	112	68 - 137

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	92.0		40 - 110

**Lab Sample ID: 400-123943-52 DU**  
**Matrix: Water**  
**Analysis Batch: 262857**

**Client Sample ID: WGWC-12**  
**Prep Type: Total/NA**  
**Prep Batch: 259764**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.130		0.02841	U	0.0804	1.00	0.143	pCi/L	0.65	1

	DU	DU	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	94.6		40 - 110

TestAmerica Pensacola

# QC Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

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

**Lab Sample ID: MB 160-260210/1-A**  
**Matrix: Water**  
**Analysis Batch: 263198**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 260210**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.05586	U	0.131	0.131	1.00	0.231	pCi/L	07/12/16 16:38	08/03/16 17:15	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.8		40 - 110					07/12/16 16:38	08/03/16 17:15	1

**Lab Sample ID: LCS 160-260210/2-A**  
**Matrix: Water**  
**Analysis Batch: 263198**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 260210**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.2	13.95		1.45	1.00	0.146	pCi/L	125	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	89.2		40 - 110						

**Lab Sample ID: LCSD 160-260210/3-A**  
**Matrix: Water**  
**Analysis Batch: 263198**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 260210**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.2	14.44		1.49	1.00	0.210	pCi/L	129	68 - 137	0.17	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	87.2		40 - 110								

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

**Lab Sample ID: MB 160-259597/1-A**  
**Matrix: Water**  
**Analysis Batch: 262456**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 259597**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.08494	U	0.265	0.265	1.00	0.485	pCi/L	07/07/16 15:59	07/28/16 16:09	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.8		40 - 110					07/07/16 15:59	07/28/16 16:09	1
Y Carrier	86.0		40 - 110					07/07/16 15:59	07/28/16 16:09	1

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# QC Sample Results

Client: Georgia Power - Environmental Lab  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

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

**Lab Sample ID: LCS 160-259597/2-A**  
**Matrix: Water**  
**Analysis Batch: 262456**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 259597**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.8	16.72		1.77	1.00	0.434	pCi/L	113	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	97.4		40 - 110
Y Carrier	85.2		40 - 110

**Lab Sample ID: 400-123943-10 DU**  
**Matrix: Water**  
**Analysis Batch: 262466**

**Client Sample ID: FB-02(LF)**  
**Prep Type: Total/NA**  
**Prep Batch: 259597**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.508	U	-0.1110	U	0.289	1.00	0.534	pCi/L	0.70	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	74.1		40 - 110
Y Carrier	86.4		40 - 110

**Lab Sample ID: MB 160-259780/1-A**  
**Matrix: Water**  
**Analysis Batch: 262649**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 259780**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.08071	U	0.266	0.266	1.00	0.463	pCi/L	07/08/16 16:52	07/29/16 14:17	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110	07/08/16 16:52	07/29/16 14:17	1
Y Carrier	84.5		40 - 110	07/08/16 16:52	07/29/16 14:17	1

**Lab Sample ID: LCS 160-259780/2-A**  
**Matrix: Water**  
**Analysis Batch: 262649**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 259780**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.8	17.32		1.87	1.00	0.462	pCi/L	117	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	94.6		40 - 110
Y Carrier	83.0		40 - 110

# QC Sample Results

Client: Georgia Power - Environmental Lab  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

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

**Lab Sample ID: 400-123943-25 DU**  
**Matrix: Water**  
**Analysis Batch: 262649**

**Client Sample ID: GWC-19**  
**Prep Type: Total/NA**  
**Prep Batch: 259780**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.209	U	0.4480	U	0.371	1.00	0.586	pCi/L	0.37	1
<b>DU DU</b>										
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>							
Ba Carrier	87.5		40 - 110							
Y Carrier	71.0		40 - 110							

**Lab Sample ID: MB 160-259781/1-A**  
**Matrix: Water**  
**Analysis Batch: 262632**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 259781**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.07473	U	0.413	0.413	1.00	0.746	pCi/L	07/08/16 16:55	07/29/16 16:10	1
<b>MB MB</b>										
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	88.3		40 - 110					07/08/16 16:55	07/29/16 16:10	1
Y Carrier	77.0		40 - 110					07/08/16 16:55	07/29/16 16:10	1

**Lab Sample ID: LCS 160-259781/2-A**  
**Matrix: Water**  
**Analysis Batch: 262632**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 259781**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.8	18.13		2.00	1.00	0.631	pCi/L	123	56 - 140
<b>LCS LCS</b>									
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>						
Ba Carrier	92.0		40 - 110						
Y Carrier	90.8		40 - 110						

**Lab Sample ID: 400-123943-52 DU**  
**Matrix: Water**  
**Analysis Batch: 262632**

**Client Sample ID: WGWC-12**  
**Prep Type: Total/NA**  
**Prep Batch: 259781**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	-0.0598	U	-0.1563	U	0.311	1.00	0.582	pCi/L	0.14	1
<b>DU DU</b>										
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>							
Ba Carrier	94.6		40 - 110							
Y Carrier	90.5		40 - 110							

# QC Sample Results

Client: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

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

**Lab Sample ID: MB 160-260212/1-A**  
**Matrix: Water**  
**Analysis Batch: 263018**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 260212**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3177	U	0.280	0.282	1.00	0.447	pCi/L	07/12/16 17:07	08/02/16 13:57	1
<b>Carrier</b>	<b>%Yield</b>	<b>MB Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	79.8		40 - 110					07/12/16 17:07	08/02/16 13:57	1
Y Carrier	87.1		40 - 110					07/12/16 17:07	08/02/16 13:57	1

**Lab Sample ID: LCS 160-260212/2-A**  
**Matrix: Water**  
**Analysis Batch: 263018**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 260212**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.8	16.46		1.78	1.00	0.491	pCi/L	111	56 - 140
<b>Carrier</b>	<b>%Yield</b>	<b>LCS Qualifier</b>	<b>Limits</b>						
Ba Carrier	89.2		40 - 110						
Y Carrier	89.3		40 - 110						

**Lab Sample ID: LCSD 160-260212/3-A**  
**Matrix: Water**  
**Analysis Batch: 263018**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 260212**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	14.8	16.82		1.82	1.00	0.455	pCi/L	114	56 - 140	0.10	1
<b>Carrier</b>	<b>%Yield</b>	<b>LCSD Qualifier</b>	<b>Limits</b>								
Ba Carrier	87.2		40 - 110								
Y Carrier	87.5		40 - 110								

**Lab Sample ID: MB 160-263225/1-A**  
**Matrix: Water**  
**Analysis Batch: 263659**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 263225**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2371	U	0.186	0.187	1.00	0.292	pCi/L	08/03/16 12:56	08/05/16 13:35	1
<b>Carrier</b>	<b>%Yield</b>	<b>MB Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	111	X	40 - 110					08/03/16 12:56	08/05/16 13:35	1
Y Carrier	86.4		40 - 110					08/03/16 12:56	08/05/16 13:35	1

TestAmerica Pensacola

# QC Sample Results

Client: Georgia Power - Environmental Lab  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

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

**Lab Sample ID: LCS 160-263225/2-A**  
**Matrix: Water**  
**Analysis Batch: 263659**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 263225**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.8	15.29		1.66	1.00	0.378	pCi/L	104	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	86.0		40 - 110
Y Carrier	89.3		40 - 110

**Lab Sample ID: LCSD 160-263225/3-A**  
**Matrix: Water**  
**Analysis Batch: 263659**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 263225**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	14.8	16.09		1.74	1.00	0.410	pCi/L	109	56 - 140	0.23	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	87.2		40 - 110
Y Carrier	84.9		40 - 110



# Environmental Laboratory

2480 Maner Road, Bin 39110  
Atlanta, Georgia 30339

Phone: (404) 799-2100

Fax: (404) 799-2141

# TRANSFER OF SAMPLES



Sample Delivery Group No. 103622

Lab Contact:		Project Name:		Vendor Laboratory Name and Address		Analysis Requested	Remarks
Jolynn Locke		Wansley CCR		Test America 3355 McLeMORE Drive Pensacola, FL 32514 850-474-1001			
Sample Date	Sample Time	No. of Containers	Project ID#	Laboratory ID#	Date of Sample Transfer		
5/24/2016	10:15	1	GWA-2	103622001	6-30-16	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/24/2016	10:09	1	GWC-6	103622002		Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/24/2016	9:55	1	GWC-32	103622003		Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/24/2016	12:45	1	GWC-27	103622004		Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/24/2016	12:24	1	GWC-7	103622005		Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/24/2016	14:15	1	GWC-9	103622006		Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/24/2016	13:40	1	GWC-8	103622007		Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/24/2016	15:05	1	FB-02(LF)	103622008		Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/24/2016	15:10	1	EB-02(LF)	103622009		Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
Rush Charges Authorized: Yes No x Signature:							

Transfer By (Signature): *Link Pastor*  
 Received By: *[Signature]*  
 Date / Time: 7/5/16 1001

Comments: Samples preserved with HNO3 to <2 pH

*Chyghubk 7/9/16 0913*





TRANSFER OF SAMPLES

Environmental Laboratory

2480 Maner Road, Bin 39110  
Atlanta, Georgia 30339

Phone: (404) 799-2100

Fax: (404) 799-2141

Sample Delivery Group No. 103479

Lab Contact:	Project Name:	Vendor Laboratory Name and Address		Laboratory ID#	Project ID#	No. of Containers	Sample Time	Analysis Requested	Remarks
Jolynn Locke	Wansley CCR	Test America 3355 McLeMore Drive Pensacola, FL 32514 850-474-1001							
Email Results To: joklocke@southernco.com									
Turnaround Time: (or expected date of results)									
21 days									
Rush Charges Authorized: Yes No x		Signature:		Date of Sample Transfer 6-30-16					
5/18/2016	WGWA-7	1	9:45	103479001	WGWA-7	1	9:45	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/18/2016	WGWA-5	1	9:30	103479002	WGWA-5	1	9:30	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/18/2016	WGWA-6	1	9:30	103479003	WGWA-6	1	9:30	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/18/2016	WGWA-3	1	12:15	103479004	WGWA-3	1	12:15	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/18/2016	WGWA-4	1	12:25	103479005	WGWA-4	1	12:25	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/18/2016	WGWC-17	1	12:35	103479006	WGWC-17	1	12:35	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/18/2016	FD-01(AP)	1		103479007	FD-01(AP)	1		Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/18/2016	FD-02(AP)	1		103479008	FD-02(AP)	1		Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/18/2016	WGWC-16	1	14:35	103479009	WGWC-16	1	14:35	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/18/2016	WGWC-15	1	14:55	103479010	WGWC-15	1	14:55	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/18/2016	WGWC-10	1	15:25	103479011	WGWC-10	1	15:25	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/18/2016	EB-01(AP)	1	15:45	103479012	EB-01(AP)	1	15:45	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	

Received By: *[Signature]*  
 Date / Time: 7/5/16 1001  
*[Signature]* 7/9/16 0913

Transfer By (Signature):  
*[Signature]*  
 Comments: (Samples preserved with HNO3 to <2 pH)

















# Environmental Laboratory

2480 Maner Road, Bin 39110  
Atlanta, Georgia 30339

Phone: (404) 799-2100

Fax: (404) 799-2141

# TRANSFER OF SAMPLES



Sample Delivery Group No. 103647

Lab Contact:		Project Name:		Vendor Laboratory Name and Address		Analysis Requested	Remarks
Jolynn Locke		Wansley CCR		Test America 3355 McLeMORE Drive Pensacola, FL 32514 850-474-1001			
Email Results To: joklocke@southernco.com		Turnaround Time: (or expected date of results)		Date of Sample Transfer			
21 days		Rush Charges Authorized: Yes No x		Signature:			
Sample Date	Sample Time	No. of Containers	Project ID#	Laboratory ID#	Analysis Requested	Remarks	
5/25/2016	10:30	1	GWC-23	103647001	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined		
5/25/2016	13:45	1	GWC-25	103647002	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined		
5/25/2016	15:50	1	GWC-26	103647003	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined		
5/25/2016	14:30	1	FB-03(LF)	103647004	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined		
5/25/2016	14:40	1	EB-03(LF)	103647005	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined		
5/25/2016	9:50	1	GWC-35	103647006	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined		
5/25/2016		1	FD-02(LF)	103647007	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined		
5/25/2016	10:07	1	GWC-11	103647008	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined		
5/25/2016	13:00	1	GWC-12	103647009	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined		
5/25/2016	12:03	1	GWC-13	103647010	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined		
5/25/2016	12:00	1	GWC-14	103647011	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined		
5/25/2016	13:37	1	GWC-16	103647012	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined		
5/25/2016	14:10	1	GWC-15	103647013	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined		

6-30-16

Received By: *[Signature]*

Date / Time: 7/5/16 1001

*[Signature]* 7/9/16 0913

Transfer By (Signature): *[Signature]*

Comments: Samples preserved with HNO3 to <2 pH



# Login Sample Receipt Checklist

Client: Georgia Power - Environmental Lab

Job Number: 400-123943-1

**Login Number: 123943**

**List Number: 1**

**Creator: Siddoway, Benjamin**

**List Source: TestAmerica Pensacola**

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



# Certification Summary

Client: Georgia Power - Environmental Lab  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

## 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: Georgia Power - Environmental Lab  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-123943-1

## 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: 400-124709-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Plant Wansley

For:

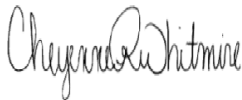
Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

8/11/2016 4:42:06 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

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

### LINKS

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results through

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

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

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

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# Case Narrative

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Job ID: 400-124709-1**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-124709-1

#### HPLC/IC

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: WGWC-15 (400-124709-22), WGWC-16 (400-124709-23) and WGWC-8 (400-124709-24). Elevated reporting limits (RLs) are provided.

#### Metals

Method(s) 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: WGWC-16 (400-124709-23) and WGWC-8 (400-124709-24). Elevated reporting limits (RLs) are provided.

Method(s) 7470A: The method blank for prep batch 315008 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.

Method(s) 7470A: The method blank for prep batch 315161 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.

Method(s) 7470A: The method blank for prep batch 315392 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.

Method(s) 7470A: The method blank for prep batch 315288 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.



# Detection Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

## Client Sample ID: WGWA-1

## Lab Sample ID: 400-124709-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.9		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.038		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0014	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

## Client Sample ID: WGWA-2

## Lab Sample ID: 400-124709-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.6		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	1.4		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.022		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	13		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00086	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0050		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Mercury	0.000081	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	84		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-7

## Lab Sample ID: 400-124709-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.1		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.012		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.88		0.25	0.13	mg/L	5		6020	Total Recoverable
Mercury	0.000072	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

## Client Sample ID: WGWA-18

## Lab Sample ID: 400-124709-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.0		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.21		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	14		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00061	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.018		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	23		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0019	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0020	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Mercury	0.000082	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	80		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 Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

## Client Sample ID: FB-1(AP)

## Lab Sample ID: 400-124709-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00056	J	0.0013	0.00035	mg/L	5		6020	Total
Mercury	0.000079	J B	0.00020	0.000070	mg/L	1		7470A	Recoverable Total/NA

## Client Sample ID: WGWA-6

## Lab Sample ID: 400-124709-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.6		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.11	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	9.0		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.0049		0.0025	0.00049	mg/L	5		6020	Total
Calcium	23		0.25	0.13	mg/L	5		6020	Recoverable Total
Lithium	0.0043	J	0.0050	0.0032	mg/L	5		6020	Recoverable Total
Mercury	0.000084	J B	0.00020	0.000070	mg/L	1		7470A	Recoverable Total/NA
Total Dissolved Solids	92		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-5

## Lab Sample ID: 400-124709-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.4		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.76	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.015		0.0025	0.00049	mg/L	5		6020	Total
Calcium	1.5		0.25	0.13	mg/L	5		6020	Recoverable Total
Cobalt	0.0014	J	0.0025	0.00040	mg/L	5		6020	Recoverable Total
Mercury	0.000085	J B	0.00020	0.000070	mg/L	1		7470A	Recoverable Total/NA

## Client Sample ID: WGWA-3

## Lab Sample ID: 400-124709-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.8		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.82	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.012		0.0025	0.00049	mg/L	5		6020	Total
Calcium	1.7		0.25	0.13	mg/L	5		6020	Recoverable Total
Mercury	0.000077	J B	0.00020	0.000070	mg/L	1		7470A	Recoverable Total/NA

## Client Sample ID: WGWA-4

## Lab Sample ID: 400-124709-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.17	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	6.5		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.0051		0.0025	0.00049	mg/L	5		6020	Total
Calcium	15		0.25	0.13	mg/L	5		6020	Recoverable Total

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

## Client Sample ID: WGWA-4 (Continued)

## Lab Sample ID: 400-124709-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.0041	J	0.0050	0.0032	mg/L	5		6020	Total
Mercury	0.000081	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	86		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FD-1(AP)

## Lab Sample ID: 400-124709-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.17	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	6.5		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.0052		0.0025	0.00049	mg/L	5		6020	Total
Calcium	15		0.25	0.13	mg/L	5		6020	Total
Lithium	0.0040	J	0.0050	0.0032	mg/L	5		6020	Total
Mercury	0.000086	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	74		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-17

## Lab Sample ID: 400-124709-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.9		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.16	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	9.7		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00058	J	0.0013	0.00046	mg/L	5		6020	Total
Barium	0.019		0.0025	0.00049	mg/L	5		6020	Total
Calcium	11		0.25	0.13	mg/L	5		6020	Total
Cobalt	0.0018	J	0.0025	0.00040	mg/L	5		6020	Total
Lithium	0.0042	J	0.0050	0.0032	mg/L	5		6020	Total
Molybdenum	0.0066	J	0.015	0.00085	mg/L	5		6020	Total
Mercury	0.000074	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	78		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-14

## Lab Sample ID: 400-124709-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.8		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	7.2		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.17		0.0025	0.00049	mg/L	5		6020	Total
Boron	0.067		0.050	0.021	mg/L	5		6020	Total
Calcium	6.6		0.25	0.13	mg/L	5		6020	Total
Mercury	0.000079	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	50		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 Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

## Client Sample ID: WGWC-13

## Lab Sample ID: 400-124709-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.9		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.34		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	11		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.039		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	7.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Molybdenum	0.0025	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Mercury	0.000081	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

## Client Sample ID: WGWC-11

## Lab Sample ID: 400-124709-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.4		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	1.6		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.029		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0025		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.000082	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

## Client Sample ID: WGWC-10

## Lab Sample ID: 400-124709-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.6		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.23		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	2.8		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.028		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	7.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0012	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00066	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.021		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Mercury	0.000082	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	42		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FD-2(AP)

## Lab Sample ID: 400-124709-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.9		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.34		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	11		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.039		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	7.3		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 Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

## Client Sample ID: FD-2(AP) (Continued)

## Lab Sample ID: 400-124709-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	0.0022	J	0.015	0.00085	mg/L	5		6020	Total
Mercury	0.000083	J B	0.00020	0.000070	mg/L	1		7470A	Recoverable Total/NA
Total Dissolved Solids	84		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FB-2(AP)

## Lab Sample ID: 400-124709-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.000082	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

## Client Sample ID: EB-1(AP)

## Lab Sample ID: 400-124709-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0013	J	0.0025	0.00049	mg/L	5		6020	Total
Mercury	0.000083	J B	0.00020	0.000070	mg/L	1		7470A	Recoverable Total/NA

## Client Sample ID: EB-2(AP)

## Lab Sample ID: 400-124709-19

No Detections.

## Client Sample ID: WGWC-12

## Lab Sample ID: 400-124709-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.8		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.11	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	16		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.019		0.0025	0.00049	mg/L	5		6020	Total
Calcium	14		0.25	0.13	mg/L	5		6020	Recoverable Total
Cobalt	0.0013	J	0.0025	0.00040	mg/L	5		6020	Recoverable Total
Lithium	0.0057		0.0050	0.0032	mg/L	5		6020	Recoverable Total
Molybdenum	0.00095	J	0.015	0.00085	mg/L	5		6020	Recoverable Total
Mercury	0.00011	J B	0.00020	0.000070	mg/L	1		7470A	Recoverable Total/NA
Total Dissolved Solids	76		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-9

## Lab Sample ID: 400-124709-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.5		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	2.0		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	37		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00078	J	0.0013	0.00046	mg/L	5		6020	Total
Barium	0.0014	J	0.0025	0.00049	mg/L	5		6020	Recoverable Total
Boron	0.25		0.050	0.021	mg/L	5		6020	Recoverable Total

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

## Client Sample ID: WGWC-9 (Continued)

## Lab Sample ID: 400-124709-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	8.2		0.25	0.13	mg/L	5		6020	Total
Lithium	0.024		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0084	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0016		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	120		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-15

## Lab Sample ID: 400-124709-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.9		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.97		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	62		5.0	3.5	mg/L	5		300.0	Total/NA
Arsenic	0.0031		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.019		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	30		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0036	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0093	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Mercury	0.000093	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	180		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-16

## Lab Sample ID: 400-124709-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	250		10	8.9	mg/L	10		300.0	Total/NA
Fluoride	0.14	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	460		10	7.0	mg/L	10		300.0	Total/NA
Arsenic	0.00090	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.069		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cobalt	0.012		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Selenium	0.0075		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.000085	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	4.7		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	190		1.3	0.63	mg/L	25		6020	Total Recoverable
Lithium - RA	0.0091		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	1200		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-8

## Lab Sample ID: 400-124709-24

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
 SDG: Ash Pond

**Client Sample ID: WGWC-8 (Continued)**

**Lab Sample ID: 400-124709-24**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	19		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.27		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	150		5.0	3.5	mg/L	5		300.0	Total/NA
Arsenic	0.00055	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.0017	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	28		0.25	0.13	mg/L	5		6020	Total Recoverable
Selenium	0.0038		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Beryllium - RA	0.0014	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Boron - RA	1.4		0.050	0.021	mg/L	5		6020	Total Recoverable
Lithium - RA	0.026		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	290		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Method Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN

#### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-124709-1	WGWA-1	Water	07/19/16 12:15	07/20/16 09:26
400-124709-2	WGWA-2	Water	07/19/16 13:15	07/20/16 09:26
400-124709-3	WGWA-7	Water	07/19/16 12:45	07/20/16 09:26
400-124709-4	WGWA-18	Water	07/19/16 12:29	07/20/16 09:26
400-124709-5	FB-1(AP)	Water	07/19/16 12:20	07/20/16 09:26
400-124709-6	WGWA-6	Water	07/19/16 15:40	07/20/16 09:26
400-124709-7	WGWA-5	Water	07/19/16 15:29	07/20/16 09:26
400-124709-8	WGWA-3	Water	07/20/16 10:32	07/21/16 09:47
400-124709-9	WGWA-4	Water	07/20/16 11:05	07/21/16 09:47
400-124709-10	FD-1(AP)	Water	07/20/16 00:00	07/21/16 09:47
400-124709-11	WGWC-17	Water	07/20/16 12:53	07/21/16 09:47
400-124709-12	WGWC-14	Water	07/20/16 12:30	07/21/16 09:47
400-124709-13	WGWC-13	Water	07/20/16 11:20	07/21/16 09:47
400-124709-14	WGWC-11	Water	07/20/16 14:40	07/21/16 09:47
400-124709-15	WGWC-10	Water	07/20/16 13:35	07/21/16 09:47
400-124709-16	FD-2(AP)	Water	07/20/16 00:00	07/21/16 09:47
400-124709-17	FB-2(AP)	Water	07/20/16 11:15	07/21/16 09:47
400-124709-18	EB-1(AP)	Water	07/20/16 09:45	07/21/16 09:47
400-124709-19	EB-2(AP)	Water	07/20/16 11:40	07/21/16 09:47
400-124709-20	WGWC-12	Water	07/20/16 15:05	07/21/16 09:47
400-124709-21	WGWC-9	Water	07/20/16 14:52	07/21/16 09:47
400-124709-22	WGWC-15	Water	07/19/16 16:15	07/21/16 09:47
400-124709-23	WGWC-16	Water	07/19/16 16:10	07/21/16 09:47
400-124709-24	WGWC-8	Water	07/20/16 15:40	07/22/16 09:12

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWA-1**

**Lab Sample ID: 400-124709-1**

**Date Collected: 07/19/16 12:15**

**Matrix: Water**

**Date Received: 07/20/16 09:26**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.9</b>		1.0	0.89	mg/L			07/26/16 20:09	1
Fluoride	<0.082		0.20	0.082	mg/L			07/26/16 20:09	1
Sulfate	<0.70		1.0	0.70	mg/L			07/26/16 20:09	1

### 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		07/26/16 09:00	07/28/16 18:39	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/26/16 09:00	07/28/16 18:39	5
<b>Barium</b>	<b>0.038</b>		0.0025	0.00049	mg/L		07/26/16 09:00	07/28/16 18:39	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 18:39	5
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/28/16 18:39	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 18:39	5
<b>Calcium</b>	<b>1.0</b>		0.25	0.13	mg/L		07/26/16 09:00	07/28/16 18:39	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/28/16 18:39	5
<b>Cobalt</b>	<b>0.0014</b>	<b>J</b>	0.0025	0.00040	mg/L		07/26/16 09:00	07/28/16 18:39	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/28/16 18:39	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/26/16 09:00	07/28/16 18:39	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/26/16 09:00	07/28/16 18:39	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/28/16 18:39	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/28/16 18:39	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		07/20/16 15:07	07/21/16 14:10	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>14</b>		5.0	3.4	mg/L			07/22/16 18:00	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWA-2**

**Lab Sample ID: 400-124709-2**

**Date Collected: 07/19/16 13:15**

**Matrix: Water**

**Date Received: 07/20/16 09:26**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>2.6</b>		1.0	0.89	mg/L			07/26/16 20:31	1
Fluoride	<0.082		0.20	0.082	mg/L			07/26/16 20:31	1
<b>Sulfate</b>	<b>1.4</b>		1.0	0.70	mg/L			07/26/16 20:31	1

**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		07/26/16 09:00	07/28/16 18:44	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/26/16 09:00	07/28/16 18:44	5
<b>Barium</b>	<b>0.022</b>		0.0025	0.00049	mg/L		07/26/16 09:00	07/28/16 18:44	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 18:44	5
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/28/16 18:44	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 18:44	5
<b>Calcium</b>	<b>13</b>		0.25	0.13	mg/L		07/26/16 09:00	07/28/16 18:44	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/28/16 18:44	5
<b>Cobalt</b>	<b>0.00086</b>	<b>J</b>	0.0025	0.00040	mg/L		07/26/16 09:00	07/28/16 18:44	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/28/16 18:44	5
<b>Lithium</b>	<b>0.0050</b>		0.0050	0.0032	mg/L		07/26/16 09:00	07/28/16 18:44	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/26/16 09:00	07/28/16 18:44	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/28/16 18:44	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/28/16 18:44	5

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.000081</b>	<b>J B</b>	0.00020	0.000070	mg/L		07/20/16 15:07	07/21/16 14:11	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>84</b>		5.0	3.4	mg/L			07/22/16 18:00	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWA-7**

**Lab Sample ID: 400-124709-3**

**Date Collected: 07/19/16 12:45**

**Matrix: Water**

**Date Received: 07/20/16 09:26**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>2.1</b>		1.0	0.89	mg/L			07/26/16 20:54	1
Fluoride	<0.082		0.20	0.082	mg/L			07/26/16 20:54	1
Sulfate	<0.70		1.0	0.70	mg/L			07/26/16 20:54	1

### 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		07/26/16 09:00	07/28/16 18:48	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/26/16 09:00	07/28/16 18:48	5
<b>Barium</b>	<b>0.012</b>		0.0025	0.00049	mg/L		07/26/16 09:00	07/28/16 18:48	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 18:48	5
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/28/16 18:48	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 18:48	5
<b>Calcium</b>	<b>0.88</b>		0.25	0.13	mg/L		07/26/16 09:00	07/28/16 18:48	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/28/16 18:48	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/26/16 09:00	07/28/16 18:48	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/28/16 18:48	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/26/16 09:00	07/28/16 18:48	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/26/16 09:00	07/28/16 18:48	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/28/16 18:48	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/28/16 18:48	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.000072</b>	<b>J B</b>	0.00020	0.000070	mg/L		07/20/16 15:07	07/21/16 14:12	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			07/22/16 18:00	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWA-18**

**Date Collected: 07/19/16 12:29**

**Date Received: 07/20/16 09:26**

**Lab Sample ID: 400-124709-4**

**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.0		1.0	0.89	mg/L			07/26/16 22:03	1
Fluoride	0.21		0.20	0.082	mg/L			07/26/16 22:03	1
Sulfate	14		1.0	0.70	mg/L			07/26/16 22:03	1

**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		07/26/16 09:00	07/28/16 18:53	5
Arsenic	0.00061	J	0.0013	0.00046	mg/L		07/26/16 09:00	07/28/16 18:53	5
Barium	0.018		0.0025	0.00049	mg/L		07/26/16 09:00	07/28/16 18:53	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 18:53	5
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/28/16 18:53	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 18:53	5
Calcium	23		0.25	0.13	mg/L		07/26/16 09:00	07/28/16 18:53	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/28/16 18:53	5
Cobalt	0.0019	J	0.0025	0.00040	mg/L		07/26/16 09:00	07/28/16 18:53	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/28/16 18:53	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/26/16 09:00	07/28/16 18:53	5
Molybdenum	0.0020	J	0.015	0.00085	mg/L		07/26/16 09:00	07/28/16 18:53	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/28/16 18:53	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/28/16 18:53	5

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000082	J B	0.00020	0.000070	mg/L		07/20/16 15:07	07/21/16 14:14	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	80		5.0	3.4	mg/L			07/22/16 18:00	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: FB-1(AP)**  
**Date Collected: 07/19/16 12:20**  
**Date Received: 07/20/16 09:26**

**Lab Sample ID: 400-124709-5**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			07/26/16 22:25	1
Fluoride	<0.082		0.20	0.082	mg/L			07/26/16 22:25	1
Sulfate	<0.70		1.0	0.70	mg/L			07/26/16 22:25	1

### 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		07/26/16 09:00	07/28/16 18:57	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/26/16 09:00	07/28/16 18:57	5
Barium	<0.00049		0.0025	0.00049	mg/L		07/26/16 09:00	07/28/16 18:57	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 18:57	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 18:57	5
Calcium	<0.13		0.25	0.13	mg/L		07/26/16 09:00	07/28/16 18:57	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/28/16 18:57	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/26/16 09:00	07/28/16 18:57	5
<b>Lead</b>	<b>0.00056</b>	<b>J</b>	0.0013	0.00035	mg/L		07/26/16 09:00	07/28/16 18:57	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/26/16 09:00	07/28/16 18:57	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/26/16 09:00	07/28/16 18:57	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/28/16 18:57	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/28/16 18:57	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/29/16 12:31	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.000079</b>	<b>J B</b>	0.00020	0.000070	mg/L		07/20/16 15:07	07/21/16 14:15	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			07/22/16 18:00	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-124709-6**

**Date Collected: 07/19/16 15:40**

**Matrix: Water**

**Date Received: 07/20/16 09:26**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.6		1.0	0.89	mg/L			07/26/16 22:48	1
Fluoride	0.11	J	0.20	0.082	mg/L			07/26/16 22:48	1
Sulfate	9.0		1.0	0.70	mg/L			07/26/16 22:48	1

### 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		07/26/16 09:00	07/28/16 19:02	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/26/16 09:00	07/28/16 19:02	5
Barium	0.0049		0.0025	0.00049	mg/L		07/26/16 09:00	07/28/16 19:02	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 19:02	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 19:02	5
Calcium	23		0.25	0.13	mg/L		07/26/16 09:00	07/28/16 19:02	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/28/16 19:02	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/26/16 09:00	07/28/16 19:02	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/28/16 19:02	5
Lithium	0.0043	J	0.0050	0.0032	mg/L		07/26/16 09:00	07/28/16 19:02	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/26/16 09:00	07/28/16 19:02	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/28/16 19:02	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/28/16 19:02	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/29/16 12:35	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		07/20/16 15:07	07/21/16 14:16	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	92		5.0	3.4	mg/L			07/22/16 18:00	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWA-5**

**Date Collected: 07/19/16 15:29**

**Date Received: 07/20/16 09:26**

**Lab Sample ID: 400-124709-7**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>2.4</b>		1.0	0.89	mg/L			07/26/16 23:11	1
Fluoride	<0.082		0.20	0.082	mg/L			07/26/16 23:11	1
<b>Sulfate</b>	<b>0.76</b>	<b>J</b>	1.0	0.70	mg/L			07/26/16 23:11	1

### 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		07/26/16 09:00	07/28/16 19:06	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/26/16 09:00	07/28/16 19:06	5
<b>Barium</b>	<b>0.015</b>		0.0025	0.00049	mg/L		07/26/16 09:00	07/28/16 19:06	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 19:06	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 19:06	5
<b>Calcium</b>	<b>1.5</b>		0.25	0.13	mg/L		07/26/16 09:00	07/28/16 19:06	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/28/16 19:06	5
<b>Cobalt</b>	<b>0.0014</b>	<b>J</b>	0.0025	0.00040	mg/L		07/26/16 09:00	07/28/16 19:06	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/28/16 19:06	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/26/16 09:00	07/28/16 19:06	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/26/16 09:00	07/28/16 19:06	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/28/16 19:06	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/28/16 19:06	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/29/16 12:40	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.000085</b>	<b>J B</b>	0.00020	0.000070	mg/L		07/20/16 15:07	07/21/16 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			07/22/16 18:00	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWA-3**

**Lab Sample ID: 400-124709-8**

**Date Collected: 07/20/16 10:32**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>1.8</b>		1.0	0.89	mg/L			07/26/16 23:34	1
Fluoride	<0.082		0.20	0.082	mg/L			07/26/16 23:34	1
<b>Sulfate</b>	<b>0.82</b>	<b>J</b>	1.0	0.70	mg/L			07/26/16 23:34	1

### 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		07/26/16 09:00	07/28/16 19:11	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/26/16 09:00	07/28/16 19:11	5
<b>Barium</b>	<b>0.012</b>		0.0025	0.00049	mg/L		07/26/16 09:00	07/28/16 19:11	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 19:11	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 19:11	5
<b>Calcium</b>	<b>1.7</b>		0.25	0.13	mg/L		07/26/16 09:00	07/28/16 19:11	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/28/16 19:11	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/26/16 09:00	07/28/16 19:11	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/28/16 19:11	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/26/16 09:00	07/28/16 19:11	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/26/16 09:00	07/28/16 19:11	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/28/16 19:11	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/28/16 19:11	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/29/16 12:44	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.000077</b>	<b>J B</b>	0.00020	0.000070	mg/L		07/21/16 16:38	07/25/16 10:09	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			07/23/16 12:51	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-124709-9**

**Date Collected: 07/20/16 11:05**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4		1.0	0.89	mg/L			07/26/16 23:57	1
Fluoride	0.17	J	0.20	0.082	mg/L			07/26/16 23:57	1
Sulfate	6.5		1.0	0.70	mg/L			07/26/16 23:57	1

### 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		07/26/16 09:00	07/28/16 19:47	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/26/16 09:00	07/28/16 19:47	5
Barium	0.0051		0.0025	0.00049	mg/L		07/26/16 09:00	07/28/16 19:47	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 19:47	5
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/28/16 19:47	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 19:47	5
Calcium	15		0.25	0.13	mg/L		07/26/16 09:00	07/28/16 19:47	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/28/16 19:47	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/26/16 09:00	07/28/16 19:47	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/28/16 19:47	5
Lithium	0.0041	J	0.0050	0.0032	mg/L		07/26/16 09:00	07/28/16 19:47	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/26/16 09:00	07/28/16 19:47	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/28/16 19:47	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/28/16 19:47	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000081	J B	0.00020	0.000070	mg/L		07/21/16 16:38	07/25/16 10:10	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	86		5.0	3.4	mg/L			07/23/16 12:51	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: FD-1(AP)**

**Lab Sample ID: 400-124709-10**

**Date Collected: 07/20/16 00:00**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4		1.0	0.89	mg/L			07/27/16 00:42	1
Fluoride	0.17	J	0.20	0.082	mg/L			07/27/16 00:42	1
Sulfate	6.5		1.0	0.70	mg/L			07/27/16 00:42	1

**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		07/26/16 09:00	07/28/16 19:51	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/26/16 09:00	07/28/16 19:51	5
Barium	0.0052		0.0025	0.00049	mg/L		07/26/16 09:00	07/28/16 19:51	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 19:51	5
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/28/16 19:51	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 19:51	5
Calcium	15		0.25	0.13	mg/L		07/26/16 09:00	07/28/16 19:51	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/28/16 19:51	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/26/16 09:00	07/28/16 19:51	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/28/16 19:51	5
Lithium	0.0040	J	0.0050	0.0032	mg/L		07/26/16 09:00	07/28/16 19:51	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/26/16 09:00	07/28/16 19:51	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/28/16 19:51	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/28/16 19:51	5

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000086	J B	0.00020	0.000070	mg/L		07/21/16 16:38	07/25/16 10:11	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	74		5.0	3.4	mg/L			07/23/16 12:51	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWC-17**

**Date Collected: 07/20/16 12:53**

**Date Received: 07/21/16 09:47**

**Lab Sample ID: 400-124709-11**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.9		1.0	0.89	mg/L			07/27/16 01:05	1
Fluoride	0.16	J	0.20	0.082	mg/L			07/27/16 01:05	1
Sulfate	9.7		1.0	0.70	mg/L			07/27/16 01:05	1

### 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		07/26/16 09:00	07/28/16 19:56	5
Arsenic	0.00058	J	0.0013	0.00046	mg/L		07/26/16 09:00	07/28/16 19:56	5
Barium	0.019		0.0025	0.00049	mg/L		07/26/16 09:00	07/28/16 19:56	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 19:56	5
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/28/16 19:56	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 19:56	5
Calcium	11		0.25	0.13	mg/L		07/26/16 09:00	07/28/16 19:56	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/28/16 19:56	5
Cobalt	0.0018	J	0.0025	0.00040	mg/L		07/26/16 09:00	07/28/16 19:56	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/28/16 19:56	5
Lithium	0.0042	J	0.0050	0.0032	mg/L		07/26/16 09:00	07/28/16 19:56	5
Molybdenum	0.0066	J	0.015	0.00085	mg/L		07/26/16 09:00	07/28/16 19:56	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/28/16 19:56	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/28/16 19:56	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		07/21/16 16:38	07/25/16 10:12	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	78		5.0	3.4	mg/L			07/23/16 12:51	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWC-14**

**Date Collected: 07/20/16 12:30**

**Date Received: 07/21/16 09:47**

**Lab Sample ID: 400-124709-12**

**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>5.8</b>		1.0	0.89	mg/L			07/27/16 01:28	1
Fluoride	<0.082		0.20	0.082	mg/L			07/27/16 01:28	1
<b>Sulfate</b>	<b>7.2</b>		1.0	0.70	mg/L			07/27/16 01:28	1

**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		07/26/16 09:00	07/28/16 20:00	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/26/16 09:00	07/28/16 20:00	5
<b>Barium</b>	<b>0.17</b>		0.0025	0.00049	mg/L		07/26/16 09:00	07/28/16 20:00	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 20:00	5
<b>Boron</b>	<b>0.067</b>		0.050	0.021	mg/L		07/26/16 09:00	07/28/16 20:00	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 20:00	5
<b>Calcium</b>	<b>6.6</b>		0.25	0.13	mg/L		07/26/16 09:00	07/28/16 20:00	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/28/16 20:00	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/26/16 09:00	07/28/16 20:00	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/28/16 20:00	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/26/16 09:00	07/28/16 20:00	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/26/16 09:00	07/28/16 20:00	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/28/16 20:00	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/28/16 20:00	5

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.000079</b>	<b>J B</b>	0.00020	0.000070	mg/L		07/21/16 16:38	07/25/16 10:14	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>50</b>		5.0	3.4	mg/L			07/23/16 12:51	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWC-13**

**Date Collected: 07/20/16 11:20**

**Date Received: 07/21/16 09:47**

**Lab Sample ID: 400-124709-13**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.9		1.0	0.89	mg/L			07/27/16 02:42	1
Fluoride	0.34		0.20	0.082	mg/L			07/27/16 02:42	1
Sulfate	11		1.0	0.70	mg/L			07/27/16 02:42	1

### 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		07/26/16 09:00	07/28/16 20:05	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/26/16 09:00	07/28/16 20:05	5
Barium	0.039		0.0025	0.00049	mg/L		07/26/16 09:00	07/28/16 20:05	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 20:05	5
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/28/16 20:05	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 20:05	5
Calcium	7.1		0.25	0.13	mg/L		07/26/16 09:00	07/28/16 20:05	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/28/16 20:05	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/26/16 09:00	07/28/16 20:05	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/28/16 20:05	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/26/16 09:00	07/28/16 20:05	5
Molybdenum	0.0025	J	0.015	0.00085	mg/L		07/26/16 09:00	07/28/16 20:05	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/28/16 20:05	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/28/16 20:05	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000081	J B	0.00020	0.000070	mg/L		07/21/16 16:38	07/25/16 10:15	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	88		5.0	3.4	mg/L			07/23/16 12:51	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWC-11**

**Date Collected: 07/20/16 14:40**

**Date Received: 07/21/16 09:47**

**Lab Sample ID: 400-124709-14**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.4</b>		1.0	0.89	mg/L			07/27/16 17:07	1
Fluoride	<0.082		0.20	0.082	mg/L			07/27/16 17:07	1
<b>Sulfate</b>	<b>1.6</b>		1.0	0.70	mg/L			07/27/16 17:07	1

### 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		07/26/16 09:00	07/28/16 20:09	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/26/16 09:00	07/28/16 20:09	5
<b>Barium</b>	<b>0.029</b>		0.0025	0.00049	mg/L		07/26/16 09:00	07/28/16 20:09	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 20:09	5
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/28/16 20:09	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 20:09	5
<b>Calcium</b>	<b>1.5</b>		0.25	0.13	mg/L		07/26/16 09:00	07/28/16 20:09	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/28/16 20:09	5
<b>Cobalt</b>	<b>0.0025</b>		0.0025	0.00040	mg/L		07/26/16 09:00	07/28/16 20:09	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/28/16 20:09	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/26/16 09:00	07/28/16 20:09	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/26/16 09:00	07/28/16 20:09	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/28/16 20:09	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/28/16 20:09	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.000082</b>	<b>J B</b>	0.00020	0.000070	mg/L		07/21/16 16:38	07/25/16 11:51	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			07/23/16 12:51	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWC-10**

**Date Collected: 07/20/16 13:35**

**Date Received: 07/21/16 09:47**

**Lab Sample ID: 400-124709-15**

**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.6		1.0	0.89	mg/L			07/27/16 18:16	1
Fluoride	0.23		0.20	0.082	mg/L			07/27/16 18:16	1
Sulfate	2.8		1.0	0.70	mg/L			07/27/16 18:16	1

**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		07/26/16 09:00	07/28/16 20:14	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/26/16 09:00	07/28/16 20:14	5
Barium	0.028		0.0025	0.00049	mg/L		07/26/16 09:00	07/28/16 20:14	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 20:14	5
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/28/16 20:14	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 20:14	5
Calcium	7.0		0.25	0.13	mg/L		07/26/16 09:00	07/28/16 20:14	5
Chromium	0.0012	J	0.0025	0.0011	mg/L		07/26/16 09:00	07/28/16 20:14	5
Cobalt	0.00066	J	0.0025	0.00040	mg/L		07/26/16 09:00	07/28/16 20:14	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/28/16 20:14	5
Lithium	0.021		0.0050	0.0032	mg/L		07/26/16 09:00	07/28/16 20:14	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/26/16 09:00	07/28/16 20:14	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/28/16 20:14	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/28/16 20:14	5

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000082	J B	0.00020	0.000070	mg/L		07/21/16 16:38	07/25/16 11:52	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	42		5.0	3.4	mg/L			07/23/16 12:51	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: FD-2(AP)**

**Lab Sample ID: 400-124709-16**

**Date Collected: 07/20/16 00:00**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.9		1.0	0.89	mg/L			07/27/16 18:39	1
Fluoride	0.34		0.20	0.082	mg/L			07/27/16 18:39	1
Sulfate	11		1.0	0.70	mg/L			07/27/16 18:39	1

## 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		07/26/16 09:00	07/28/16 20:18	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/26/16 09:00	07/28/16 20:18	5
Barium	0.039		0.0025	0.00049	mg/L		07/26/16 09:00	07/28/16 20:18	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 20:18	5
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/28/16 20:18	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 20:18	5
Calcium	7.3		0.25	0.13	mg/L		07/26/16 09:00	07/28/16 20:18	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/28/16 20:18	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/26/16 09:00	07/28/16 20:18	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/28/16 20:18	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/26/16 09:00	07/28/16 20:18	5
Molybdenum	0.0022	J	0.015	0.00085	mg/L		07/26/16 09:00	07/28/16 20:18	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/28/16 20:18	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/28/16 20:18	5

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000083	J B	0.00020	0.000070	mg/L		07/21/16 16:38	07/25/16 11:53	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	84		5.0	3.4	mg/L			07/23/16 12:51	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: FB-2(AP)**

**Lab Sample ID: 400-124709-17**

**Date Collected: 07/20/16 11:15**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			07/27/16 19:01	1
Fluoride	<0.082		0.20	0.082	mg/L			07/27/16 19:01	1
Sulfate	<0.70		1.0	0.70	mg/L			07/27/16 19:01	1

### 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		07/26/16 09:00	07/28/16 20:37	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/26/16 09:00	07/28/16 20:37	5
Barium	<0.00049		0.0025	0.00049	mg/L		07/26/16 09:00	07/28/16 20:37	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 20:37	5
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/28/16 20:37	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 20:37	5
Calcium	<0.13		0.25	0.13	mg/L		07/26/16 09:00	07/28/16 20:37	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/28/16 20:37	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/26/16 09:00	07/28/16 20:37	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/28/16 20:37	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/26/16 09:00	07/28/16 20:37	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/26/16 09:00	07/28/16 20:37	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/28/16 20:37	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/28/16 20:37	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000082	J B	0.00020	0.000070	mg/L		07/21/16 16:38	07/25/16 11:54	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			07/23/16 12:51	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: EB-1(AP)**

**Lab Sample ID: 400-124709-18**

**Date Collected: 07/20/16 09:45**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			07/27/16 19:24	1
Fluoride	<0.082		0.20	0.082	mg/L			07/27/16 19:24	1
Sulfate	<0.70		1.0	0.70	mg/L			07/27/16 19:24	1

### 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		07/26/16 09:00	07/28/16 20:41	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/26/16 09:00	07/28/16 20:41	5
<b>Barium</b>	<b>0.0013</b>	<b>J</b>	0.0025	0.00049	mg/L		07/26/16 09:00	07/28/16 20:41	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 20:41	5
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/28/16 20:41	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 20:41	5
Calcium	<0.13		0.25	0.13	mg/L		07/26/16 09:00	07/28/16 20:41	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/28/16 20:41	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/26/16 09:00	07/28/16 20:41	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/28/16 20:41	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/26/16 09:00	07/28/16 20:41	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/26/16 09:00	07/28/16 20:41	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/28/16 20:41	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/28/16 20:41	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.000083</b>	<b>J B</b>	0.00020	0.000070	mg/L		07/21/16 16:38	07/25/16 11:56	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			07/23/16 12:51	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: EB-2(AP)**

**Date Collected: 07/20/16 11:40**

**Date Received: 07/21/16 09:47**

**Lab Sample ID: 400-124709-19**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			07/27/16 20:33	1
Fluoride	<0.082		0.20	0.082	mg/L			07/27/16 20:33	1
Sulfate	<0.70		1.0	0.70	mg/L			07/27/16 20:33	1

### 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		07/26/16 09:00	07/28/16 20:45	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/26/16 09:00	07/28/16 20:45	5
Barium	<0.00049		0.0025	0.00049	mg/L		07/26/16 09:00	07/28/16 20:45	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 20:45	5
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/28/16 20:45	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 20:45	5
Calcium	<0.13		0.25	0.13	mg/L		07/26/16 09:00	07/28/16 20:45	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/28/16 20:45	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/26/16 09:00	07/28/16 20:45	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/28/16 20:45	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/26/16 09:00	07/28/16 20:45	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/26/16 09:00	07/28/16 20:45	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/28/16 20:45	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/28/16 20:45	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		07/21/16 16:46	07/25/16 13:04	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			07/23/16 12:51	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-124709-20**

**Date Collected: 07/20/16 15:05**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.8		1.0	0.89	mg/L			07/27/16 20:55	1
Fluoride	0.11	J	0.20	0.082	mg/L			07/27/16 20:55	1
Sulfate	16		1.0	0.70	mg/L			07/27/16 20:55	1

**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		07/26/16 09:00	07/28/16 20:50	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/26/16 09:00	07/28/16 20:50	5
Barium	0.019		0.0025	0.00049	mg/L		07/26/16 09:00	07/28/16 20:50	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 20:50	5
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/28/16 20:50	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 20:50	5
Calcium	14		0.25	0.13	mg/L		07/26/16 09:00	07/28/16 20:50	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/28/16 20:50	5
Cobalt	0.0013	J	0.0025	0.00040	mg/L		07/26/16 09:00	07/28/16 20:50	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/28/16 20:50	5
Lithium	0.0057		0.0050	0.0032	mg/L		07/26/16 09:00	07/28/16 20:50	5
Molybdenum	0.00095	J	0.015	0.00085	mg/L		07/26/16 09:00	07/28/16 20:50	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/28/16 20:50	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/28/16 20:50	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		07/21/16 16:46	07/25/16 13:05	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	76		5.0	3.4	mg/L			07/23/16 12:51	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-124709-21**

**Date Collected: 07/20/16 14:52**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.5		1.0	0.89	mg/L			07/27/16 21:18	1
Fluoride	2.0		0.20	0.082	mg/L			07/27/16 21:18	1
Sulfate	37		1.0	0.70	mg/L			07/27/16 21:18	1

**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		07/26/16 09:00	07/26/16 15:39	5
Arsenic	0.00078	J	0.0013	0.00046	mg/L		07/26/16 09:00	07/26/16 15:39	5
Barium	0.0014	J	0.0025	0.00049	mg/L		07/26/16 09:00	07/26/16 15:39	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/26/16 15:39	5
Boron	0.25		0.050	0.021	mg/L		07/26/16 09:00	07/26/16 15:39	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/26/16 15:39	5
Calcium	8.2		0.25	0.13	mg/L		07/26/16 09:00	07/26/16 15:39	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/26/16 15:39	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/26/16 09:00	07/26/16 15:39	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/26/16 15:39	5
Lithium	0.024		0.0050	0.0032	mg/L		07/26/16 09:00	07/26/16 15:39	5
Molybdenum	0.0084	J	0.015	0.00085	mg/L		07/26/16 09:00	07/26/16 15:39	5
Selenium	0.0016		0.0013	0.00024	mg/L		07/26/16 09:00	07/26/16 15:39	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/26/16 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		07/21/16 16:46	07/25/16 13:19	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	120		5.0	3.4	mg/L			07/23/16 12:51	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
 SDG: Ash Pond

**Client Sample ID: WGWC-15**

**Date Collected: 07/19/16 16:15**

**Date Received: 07/21/16 09:47**

**Lab Sample ID: 400-124709-22**

**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.9		1.0	0.89	mg/L			07/27/16 21:41	1
Fluoride	0.97		0.20	0.082	mg/L			07/27/16 21:41	1
Sulfate	62		5.0	3.5	mg/L			07/28/16 20:46	5

**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		07/26/16 09:00	07/26/16 15:43	5
Arsenic	0.0031		0.0013	0.00046	mg/L		07/26/16 09:00	07/26/16 15:43	5
Barium	0.019		0.0025	0.00049	mg/L		07/26/16 09:00	07/26/16 15:43	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/26/16 15:43	5
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/26/16 15:43	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/26/16 15:43	5
Calcium	30		0.25	0.13	mg/L		07/26/16 09:00	07/26/16 15:43	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/26/16 15:43	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/26/16 09:00	07/26/16 15:43	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/26/16 15:43	5
Lithium	0.0036	J	0.0050	0.0032	mg/L		07/26/16 09:00	07/26/16 15:43	5
Molybdenum	0.0093	J	0.015	0.00085	mg/L		07/26/16 09:00	07/26/16 15:43	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/26/16 15:43	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/26/16 15:43	5

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000093	J B	0.00020	0.000070	mg/L		07/21/16 16:46	07/25/16 13:20	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	180		5.0	3.4	mg/L			07/22/16 18:00	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-124709-23**

**Date Collected: 07/19/16 16:10**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	250		10	8.9	mg/L			07/28/16 21:09	10
Fluoride	0.14	J	0.20	0.082	mg/L			07/27/16 22:04	1
Sulfate	460		10	7.0	mg/L			07/28/16 21:09	10

### 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		07/26/16 09:00	07/26/16 15:59	5
Arsenic	0.00090	J	0.0013	0.00046	mg/L		07/26/16 09:00	07/26/16 15:59	5
Barium	0.069		0.0025	0.00049	mg/L		07/26/16 09:00	07/26/16 15:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/26/16 15:59	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/26/16 15:59	5
Cobalt	0.012		0.0025	0.00040	mg/L		07/26/16 09:00	07/26/16 15:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/26/16 15:59	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/26/16 09:00	07/26/16 15:59	5
Selenium	0.0075		0.0013	0.00024	mg/L		07/26/16 09:00	07/26/16 15:59	5
Thallium	0.000085	J	0.00050	0.000085	mg/L		07/26/16 09:00	07/26/16 15:59	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.7		0.25	0.11	mg/L		07/26/16 09:00	07/27/16 15:37	25
Calcium	190		1.3	0.63	mg/L		07/26/16 09:00	07/27/16 15:37	25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/27/16 15:33	5
Lithium	0.0091		0.0050	0.0032	mg/L		07/26/16 09:00	07/27/16 15:33	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		07/21/16 16:46	07/25/16 13:22	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1200		5.0	3.4	mg/L			07/22/16 18:00	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-124709-24**

**Date Collected: 07/20/16 15:40**

**Matrix: Water**

**Date Received: 07/22/16 09:12**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19		1.0	0.89	mg/L			07/27/16 22:27	1
Fluoride	0.27		0.20	0.082	mg/L			07/27/16 22:27	1
Sulfate	150		5.0	3.5	mg/L			07/28/16 21:31	5

### 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		07/26/16 09:00	07/26/16 16:04	5
Arsenic	0.00055	J	0.0013	0.00046	mg/L		07/26/16 09:00	07/26/16 16:04	5
Barium	0.0017	J	0.0025	0.00049	mg/L		07/26/16 09:00	07/26/16 16:04	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/26/16 16:04	5
Calcium	28		0.25	0.13	mg/L		07/26/16 09:00	07/26/16 16:04	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/26/16 16:04	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/26/16 09:00	07/26/16 16:04	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/26/16 16:04	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/26/16 09:00	07/26/16 16:04	5
Selenium	0.0038		0.0013	0.00024	mg/L		07/26/16 09:00	07/26/16 16:04	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/26/16 16:04	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.0014	J	0.0025	0.00034	mg/L		07/26/16 09:00	07/27/16 15:44	5
Boron	1.4		0.050	0.021	mg/L		07/26/16 09:00	07/27/16 15:44	5
Lithium	0.026		0.0050	0.0032	mg/L		07/26/16 09:00	07/27/16 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		07/22/16 11:49	07/25/16 11:59	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	290		5.0	3.4	mg/L			07/23/16 12:51	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

## Qualifiers

### HPLC/IC

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.
E	Result exceeded calibration range.

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

## 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 Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWA-1**

**Date Collected: 07/19/16 12:15**

**Date Received: 07/20/16 09:26**

**Lab Sample ID: 400-124709-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	315982	07/26/16 20:09	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	316214	07/28/16 18:39	RJB	TAL PEN
Total/NA	Prep	7470A			315008	07/20/16 15:07	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315277	07/21/16 14:10	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315446	07/22/16 18:00	TET	TAL PEN

**Client Sample ID: WGWA-2**

**Date Collected: 07/19/16 13:15**

**Date Received: 07/20/16 09:26**

**Lab Sample ID: 400-124709-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	315982	07/26/16 20:31	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	316214	07/28/16 18:44	RJB	TAL PEN
Total/NA	Prep	7470A			315008	07/20/16 15:07	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315277	07/21/16 14:11	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315446	07/22/16 18:00	TET	TAL PEN

**Client Sample ID: WGWA-7**

**Date Collected: 07/19/16 12:45**

**Date Received: 07/20/16 09:26**

**Lab Sample ID: 400-124709-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	315982	07/26/16 20:54	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	316214	07/28/16 18:48	RJB	TAL PEN
Total/NA	Prep	7470A			315008	07/20/16 15:07	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315277	07/21/16 14:12	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315446	07/22/16 18:00	TET	TAL PEN

**Client Sample ID: WGWA-18**

**Date Collected: 07/19/16 12:29**

**Date Received: 07/20/16 09:26**

**Lab Sample ID: 400-124709-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	315982	07/26/16 22:03	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	316214	07/28/16 18:53	RJB	TAL PEN
Total/NA	Prep	7470A			315008	07/20/16 15:07	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315277	07/21/16 14:14	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315446	07/22/16 18:00	TET	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: FB-1(AP)**

**Lab Sample ID: 400-124709-5**

**Date Collected: 07/19/16 12:20**

**Matrix: Water**

**Date Received: 07/20/16 09:26**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	315982	07/26/16 22:25	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	316214	07/28/16 18:57	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	316711	07/29/16 12:31	RJB	TAL PEN
Total/NA	Prep	7470A			315008	07/20/16 15:07	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315277	07/21/16 14:15	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315446	07/22/16 18:00	TET	TAL PEN

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-124709-6**

**Date Collected: 07/19/16 15:40**

**Matrix: Water**

**Date Received: 07/20/16 09:26**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	315982	07/26/16 22:48	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	316214	07/28/16 19:02	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	316711	07/29/16 12:35	RJB	TAL PEN
Total/NA	Prep	7470A			315008	07/20/16 15:07	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315277	07/21/16 14:16	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315446	07/22/16 18:00	TET	TAL PEN

**Client Sample ID: WGWA-5**

**Lab Sample ID: 400-124709-7**

**Date Collected: 07/19/16 15:29**

**Matrix: Water**

**Date Received: 07/20/16 09:26**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	315982	07/26/16 23:11	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	316214	07/28/16 19:06	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	316711	07/29/16 12:40	RJB	TAL PEN
Total/NA	Prep	7470A			315008	07/20/16 15:07	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315277	07/21/16 14:17	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315446	07/22/16 18:00	TET	TAL PEN



# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWA-3**

**Date Collected: 07/20/16 10:32**

**Date Received: 07/21/16 09:47**

**Lab Sample ID: 400-124709-8**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	315982	07/26/16 23:34	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	316214	07/28/16 19:11	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	316711	07/29/16 12:44	RJB	TAL PEN
Total/NA	Prep	7470A			315161	07/21/16 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315624	07/25/16 10:09	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315483	07/23/16 12:51	TET	TAL PEN

**Client Sample ID: WGWA-4**

**Date Collected: 07/20/16 11:05**

**Date Received: 07/21/16 09:47**

**Lab Sample ID: 400-124709-9**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	315982	07/26/16 23:57	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	316214	07/28/16 19:47	RJB	TAL PEN
Total/NA	Prep	7470A			315161	07/21/16 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315624	07/25/16 10:10	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315483	07/23/16 12:51	TET	TAL PEN

**Client Sample ID: FD-1(AP)**

**Date Collected: 07/20/16 00:00**

**Date Received: 07/21/16 09:47**

**Lab Sample ID: 400-124709-10**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	315982	07/27/16 00:42	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	316214	07/28/16 19:51	RJB	TAL PEN
Total/NA	Prep	7470A			315161	07/21/16 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315624	07/25/16 10:11	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315483	07/23/16 12:51	TET	TAL PEN

**Client Sample ID: WGWC-17**

**Date Collected: 07/20/16 12:53**

**Date Received: 07/21/16 09:47**

**Lab Sample ID: 400-124709-11**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	315982	07/27/16 01:05	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	316214	07/28/16 19:56	RJB	TAL PEN
Total/NA	Prep	7470A			315161	07/21/16 16:38	JAP	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-124709-11**

**Date Collected: 07/20/16 12:53**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7470A		1	315624	07/25/16 10:12	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315483	07/23/16 12:51	TET	TAL PEN

**Client Sample ID: WGWC-14**

**Lab Sample ID: 400-124709-12**

**Date Collected: 07/20/16 12:30**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	315982	07/27/16 01:28	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	316214	07/28/16 20:00	RJB	TAL PEN
Total/NA	Prep	7470A			315161	07/21/16 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315624	07/25/16 10:14	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315483	07/23/16 12:51	TET	TAL PEN

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-124709-13**

**Date Collected: 07/20/16 11:20**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	315982	07/27/16 02:42	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	316214	07/28/16 20:05	RJB	TAL PEN
Total/NA	Prep	7470A			315161	07/21/16 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315624	07/25/16 10:15	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315483	07/23/16 12:51	TET	TAL PEN

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-124709-14**

**Date Collected: 07/20/16 14:40**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	316018	07/27/16 17:07	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	316214	07/28/16 20:09	RJB	TAL PEN
Total/NA	Prep	7470A			315161	07/21/16 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315624	07/25/16 11:51	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315483	07/23/16 12:51	TET	TAL PEN

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-124709-15**

**Date Collected: 07/20/16 13:35**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	316018	07/27/16 18:16	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	316214	07/28/16 20:14	RJB	TAL PEN
Total/NA	Prep	7470A			315161	07/21/16 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315624	07/25/16 11:52	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315483	07/23/16 12:51	TET	TAL PEN

**Client Sample ID: FD-2(AP)**

**Lab Sample ID: 400-124709-16**

**Date Collected: 07/20/16 00:00**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	316018	07/27/16 18:39	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	316214	07/28/16 20:18	RJB	TAL PEN
Total/NA	Prep	7470A			315161	07/21/16 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315624	07/25/16 11:53	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315483	07/23/16 12:51	TET	TAL PEN

**Client Sample ID: FB-2(AP)**

**Lab Sample ID: 400-124709-17**

**Date Collected: 07/20/16 11:15**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	316018	07/27/16 19:01	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	316214	07/28/16 20:37	RJB	TAL PEN
Total/NA	Prep	7470A			315161	07/21/16 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315624	07/25/16 11:54	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315483	07/23/16 12:51	TET	TAL PEN

**Client Sample ID: EB-1(AP)**

**Lab Sample ID: 400-124709-18**

**Date Collected: 07/20/16 09:45**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	316018	07/27/16 19:24	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	316214	07/28/16 20:41	RJB	TAL PEN
Total/NA	Prep	7470A			315161	07/21/16 16:38	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315624	07/25/16 11:56	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315483	07/23/16 12:51	TET	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: EB-2(AP)**

**Lab Sample ID: 400-124709-19**

**Date Collected: 07/20/16 11:40**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	316018	07/27/16 20:33	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	316214	07/28/16 20:45	RJB	TAL PEN
Total/NA	Prep	7470A			315288	07/21/16 16:46	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315624	07/25/16 13:04	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315483	07/23/16 12:51	TET	TAL PEN

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-124709-20**

**Date Collected: 07/20/16 15:05**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	316018	07/27/16 20:55	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315423	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	316214	07/28/16 20:50	RJB	TAL PEN
Total/NA	Prep	7470A			315288	07/21/16 16:46	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315624	07/25/16 13:05	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315483	07/23/16 12:51	TET	TAL PEN

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-124709-21**

**Date Collected: 07/20/16 14:52**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	316018	07/27/16 21:18	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315426	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	315911	07/26/16 15:39	GKP	TAL PEN
Total/NA	Prep	7470A			315288	07/21/16 16:46	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315624	07/25/16 13:19	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315483	07/23/16 12:51	TET	TAL PEN

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-124709-22**

**Date Collected: 07/19/16 16:15**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	316018	07/27/16 21:41	TAJ	TAL PEN
Total/NA	Analysis	300.0		5	316290	07/28/16 20:46	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315426	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	315911	07/26/16 15:43	GKP	TAL PEN
Total/NA	Prep	7470A			315288	07/21/16 16:46	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315624	07/25/16 13:20	JAP	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-124709-22**

**Date Collected: 07/19/16 16:15**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	315446	07/22/16 18:00	TET	TAL PEN

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-124709-23**

**Date Collected: 07/19/16 16:10**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	316018	07/27/16 22:04	TAJ	TAL PEN
Total/NA	Analysis	300.0		10	316290	07/28/16 21:09	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315426	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	315911	07/26/16 15:59	GKP	TAL PEN
Total Recoverable	Prep	3005A	RA		315426	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	316086	07/27/16 15:33	RJB	TAL PEN
Total Recoverable	Prep	3005A	DL		315426	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	DL	25	316086	07/27/16 15:37	RJB	TAL PEN
Total/NA	Prep	7470A			315288	07/21/16 16:46	JAP	TAL PEN
Total/NA	Analysis	7470A		1	315624	07/25/16 13:22	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315446	07/22/16 18:00	TET	TAL PEN

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-124709-24**

**Date Collected: 07/20/16 15:40**

**Matrix: Water**

**Date Received: 07/22/16 09:12**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	316018	07/27/16 22:27	TAJ	TAL PEN
Total/NA	Analysis	300.0		5	316290	07/28/16 21:31	TAJ	TAL PEN
Total Recoverable	Prep	3005A			315426	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	315911	07/26/16 16:04	GKP	TAL PEN
Total Recoverable	Prep	3005A	RA		315426	07/26/16 09:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	316086	07/27/16 15:44	RJB	TAL PEN
Total/NA	Prep	7470A			315392	07/22/16 11:49	DN1	TAL PEN
Total/NA	Analysis	7470A		1	315624	07/25/16 11:59	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	315483	07/23/16 12:51	TET	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 Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

## HPLC/IC

### Analysis Batch: 315982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-1	WGWA-1	Total/NA	Water	300.0	
400-124709-2	WGWA-2	Total/NA	Water	300.0	
400-124709-3	WGWA-7	Total/NA	Water	300.0	
400-124709-4	WGWA-18	Total/NA	Water	300.0	
400-124709-5	FB-1(AP)	Total/NA	Water	300.0	
400-124709-6	WGWA-6	Total/NA	Water	300.0	
400-124709-7	WGWA-5	Total/NA	Water	300.0	
400-124709-8	WGWA-3	Total/NA	Water	300.0	
400-124709-9	WGWA-4	Total/NA	Water	300.0	
400-124709-10	FD-1(AP)	Total/NA	Water	300.0	
400-124709-11	WGWC-17	Total/NA	Water	300.0	
400-124709-12	WGWC-14	Total/NA	Water	300.0	
400-124709-13	WGWC-13	Total/NA	Water	300.0	
MB 400-315982/4	Method Blank	Total/NA	Water	300.0	
LCS 400-315982/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-315982/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-124709-9 MS	WGWA-4	Total/NA	Water	300.0	
400-124898-B-7 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 316018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-14	WGWC-11	Total/NA	Water	300.0	
400-124709-15	WGWC-10	Total/NA	Water	300.0	
400-124709-16	FD-2(AP)	Total/NA	Water	300.0	
400-124709-17	FB-2(AP)	Total/NA	Water	300.0	
400-124709-18	EB-1(AP)	Total/NA	Water	300.0	
400-124709-19	EB-2(AP)	Total/NA	Water	300.0	
400-124709-20	WGWC-12	Total/NA	Water	300.0	
400-124709-21	WGWC-9	Total/NA	Water	300.0	
400-124709-22	WGWC-15	Total/NA	Water	300.0	
400-124709-23	WGWC-16	Total/NA	Water	300.0	
400-124709-24	WGWC-8	Total/NA	Water	300.0	
MB 400-316018/4	Method Blank	Total/NA	Water	300.0	
LCS 400-316018/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-316018/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-124709-14 MS	WGWC-11	Total/NA	Water	300.0	
400-124709-14 MSD	WGWC-11	Total/NA	Water	300.0	
400-124709-24 MS	WGWC-8	Total/NA	Water	300.0	

### Analysis Batch: 316290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-22	WGWC-15	Total/NA	Water	300.0	
400-124709-23	WGWC-16	Total/NA	Water	300.0	
400-124709-24	WGWC-8	Total/NA	Water	300.0	
MB 400-316290/4	Method Blank	Total/NA	Water	300.0	
LCS 400-316290/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-316290/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-125086-A-4 MS	Matrix Spike	Total/NA	Water	300.0	
400-125086-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

## Metals

### Prep Batch: 315008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-1	WGWA-1	Total/NA	Water	7470A	
400-124709-2	WGWA-2	Total/NA	Water	7470A	
400-124709-3	WGWA-7	Total/NA	Water	7470A	
400-124709-4	WGWA-18	Total/NA	Water	7470A	
400-124709-5	FB-1(AP)	Total/NA	Water	7470A	
400-124709-6	WGWA-6	Total/NA	Water	7470A	
400-124709-7	WGWA-5	Total/NA	Water	7470A	
MB 400-315008/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-315008/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-124627-D-12-B MS	Matrix Spike	Total/NA	Water	7470A	
400-124627-E-12-A MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

### Prep Batch: 315161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-8	WGWA-3	Total/NA	Water	7470A	
400-124709-9	WGWA-4	Total/NA	Water	7470A	
400-124709-10	FD-1(AP)	Total/NA	Water	7470A	
400-124709-11	WGWC-17	Total/NA	Water	7470A	
400-124709-12	WGWC-14	Total/NA	Water	7470A	
400-124709-13	WGWC-13	Total/NA	Water	7470A	
400-124709-14	WGWC-11	Total/NA	Water	7470A	
400-124709-15	WGWC-10	Total/NA	Water	7470A	
400-124709-16	FD-2(AP)	Total/NA	Water	7470A	
400-124709-17	FB-2(AP)	Total/NA	Water	7470A	
400-124709-18	EB-1(AP)	Total/NA	Water	7470A	
MB 400-315161/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-315161/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-124738-H-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-124738-H-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

### Analysis Batch: 315277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-1	WGWA-1	Total/NA	Water	7470A	315008
400-124709-2	WGWA-2	Total/NA	Water	7470A	315008
400-124709-3	WGWA-7	Total/NA	Water	7470A	315008
400-124709-4	WGWA-18	Total/NA	Water	7470A	315008
400-124709-5	FB-1(AP)	Total/NA	Water	7470A	315008
400-124709-6	WGWA-6	Total/NA	Water	7470A	315008
400-124709-7	WGWA-5	Total/NA	Water	7470A	315008
MB 400-315008/14-A	Method Blank	Total/NA	Water	7470A	315008
LCS 400-315008/15-A	Lab Control Sample	Total/NA	Water	7470A	315008
400-124627-D-12-B MS	Matrix Spike	Total/NA	Water	7470A	315008
400-124627-E-12-A MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	315008

### Prep Batch: 315288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-19	EB-2(AP)	Total/NA	Water	7470A	
400-124709-20	WGWC-12	Total/NA	Water	7470A	
400-124709-21	WGWC-9	Total/NA	Water	7470A	
400-124709-22	WGWC-15	Total/NA	Water	7470A	
400-124709-23	WGWC-16	Total/NA	Water	7470A	

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

## Metals (Continued)

### Prep Batch: 315288 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-315288/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-315288/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-124709-20 MS	WGWC-12	Total/NA	Water	7470A	
400-124709-20 MSD	WGWC-12	Total/NA	Water	7470A	

### Prep Batch: 315392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-24	WGWC-8	Total/NA	Water	7470A	
MB 400-315392/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-315392/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-124841-B-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-124841-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

### Prep Batch: 315423

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-1	WGWA-1	Total Recoverable	Water	3005A	
400-124709-2	WGWA-2	Total Recoverable	Water	3005A	
400-124709-3	WGWA-7	Total Recoverable	Water	3005A	
400-124709-4	WGWA-18	Total Recoverable	Water	3005A	
400-124709-5 - RA	FB-1(AP)	Total Recoverable	Water	3005A	
400-124709-5	FB-1(AP)	Total Recoverable	Water	3005A	
400-124709-6 - RA	WGWA-6	Total Recoverable	Water	3005A	
400-124709-6	WGWA-6	Total Recoverable	Water	3005A	
400-124709-7 - RA	WGWA-5	Total Recoverable	Water	3005A	
400-124709-7	WGWA-5	Total Recoverable	Water	3005A	
400-124709-8 - RA	WGWA-3	Total Recoverable	Water	3005A	
400-124709-8	WGWA-3	Total Recoverable	Water	3005A	
400-124709-9	WGWA-4	Total Recoverable	Water	3005A	
400-124709-10	FD-1(AP)	Total Recoverable	Water	3005A	
400-124709-11	WGWC-17	Total Recoverable	Water	3005A	
400-124709-12	WGWC-14	Total Recoverable	Water	3005A	
400-124709-13	WGWC-13	Total Recoverable	Water	3005A	
400-124709-14	WGWC-11	Total Recoverable	Water	3005A	
400-124709-15	WGWC-10	Total Recoverable	Water	3005A	
400-124709-16	FD-2(AP)	Total Recoverable	Water	3005A	
400-124709-17	FB-2(AP)	Total Recoverable	Water	3005A	
400-124709-18	EB-1(AP)	Total Recoverable	Water	3005A	
400-124709-19	EB-2(AP)	Total Recoverable	Water	3005A	
400-124709-20	WGWC-12	Total Recoverable	Water	3005A	
MB 400-315423/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-315423/2-A ^1	Lab Control Sample	Total Recoverable	Water	3005A	
400-124709-8 MS	WGWA-3	Total Recoverable	Water	3005A	
400-124709-8 MSD	WGWA-3	Total Recoverable	Water	3005A	

### Prep Batch: 315426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-21	WGWC-9	Total Recoverable	Water	3005A	
400-124709-22	WGWC-15	Total Recoverable	Water	3005A	
400-124709-23 - RA	WGWC-16	Total Recoverable	Water	3005A	
400-124709-23 - DL	WGWC-16	Total Recoverable	Water	3005A	
400-124709-23	WGWC-16	Total Recoverable	Water	3005A	

TestAmerica Pensacola



# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

## Metals (Continued)

### Prep Batch: 315426 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-24 - RA	WGWC-8	Total Recoverable	Water	3005A	
400-124709-24	WGWC-8	Total Recoverable	Water	3005A	
MB 400-315426/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-315426/2-A ^1	Lab Control Sample	Total Recoverable	Water	3005A	
400-124804-C-1-C MS ^5 - F	Matrix Spike	Total Recoverable	Water	3005A	
400-124804-C-1-C MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-124804-C-1-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
400-124804-C-1-D MSD ^5 -	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Analysis Batch: 315624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-8	WGWA-3	Total/NA	Water	7470A	315161
400-124709-9	WGWA-4	Total/NA	Water	7470A	315161
400-124709-10	FD-1(AP)	Total/NA	Water	7470A	315161
400-124709-11	WGWC-17	Total/NA	Water	7470A	315161
400-124709-12	WGWC-14	Total/NA	Water	7470A	315161
400-124709-13	WGWC-13	Total/NA	Water	7470A	315161
400-124709-14	WGWC-11	Total/NA	Water	7470A	315161
400-124709-15	WGWC-10	Total/NA	Water	7470A	315161
400-124709-16	FD-2(AP)	Total/NA	Water	7470A	315161
400-124709-17	FB-2(AP)	Total/NA	Water	7470A	315161
400-124709-18	EB-1(AP)	Total/NA	Water	7470A	315161
400-124709-19	EB-2(AP)	Total/NA	Water	7470A	315288
400-124709-20	WGWC-12	Total/NA	Water	7470A	315288
400-124709-21	WGWC-9	Total/NA	Water	7470A	315288
400-124709-22	WGWC-15	Total/NA	Water	7470A	315288
400-124709-23	WGWC-16	Total/NA	Water	7470A	315288
400-124709-24	WGWC-8	Total/NA	Water	7470A	315392
MB 400-315161/14-A	Method Blank	Total/NA	Water	7470A	315161
MB 400-315288/14-A	Method Blank	Total/NA	Water	7470A	315288
MB 400-315392/14-A	Method Blank	Total/NA	Water	7470A	315392
LCS 400-315161/15-A	Lab Control Sample	Total/NA	Water	7470A	315161
LCS 400-315288/15-A	Lab Control Sample	Total/NA	Water	7470A	315288
LCS 400-315392/15-A	Lab Control Sample	Total/NA	Water	7470A	315392
400-124709-20 MS	WGWC-12	Total/NA	Water	7470A	315288
400-124709-20 MSD	WGWC-12	Total/NA	Water	7470A	315288
400-124738-H-1-B MS	Matrix Spike	Total/NA	Water	7470A	315161
400-124738-H-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	315161
400-124841-B-1-B MS	Matrix Spike	Total/NA	Water	7470A	315392
400-124841-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	315392

### Analysis Batch: 315911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-21	WGWC-9	Total Recoverable	Water	6020	315426
400-124709-22	WGWC-15	Total Recoverable	Water	6020	315426
400-124709-23	WGWC-16	Total Recoverable	Water	6020	315426
400-124709-24	WGWC-8	Total Recoverable	Water	6020	315426
MB 400-315426/1-A ^5	Method Blank	Total Recoverable	Water	6020	315426
LCS 400-315426/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	315426
400-124804-C-1-C MS ^5	Matrix Spike	Total Recoverable	Water	6020	315426
400-124804-C-1-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	315426

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

## Analysis Batch: 316086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-23 - RA	WGWC-16	Total Recoverable	Water	6020	315426
400-124709-23 - DL	WGWC-16	Total Recoverable	Water	6020	315426
400-124709-24 - RA	WGWC-8	Total Recoverable	Water	6020	315426
400-124804-C-1-C MS ^5 - F	Matrix Spike	Total Recoverable	Water	6020	315426
400-124804-C-1-D MSD ^5 -	Matrix Spike Duplicate	Total Recoverable	Water	6020	315426

## Analysis Batch: 316214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-1	WGWA-1	Total Recoverable	Water	6020	315423
400-124709-2	WGWA-2	Total Recoverable	Water	6020	315423
400-124709-3	WGWA-7	Total Recoverable	Water	6020	315423
400-124709-4	WGWA-18	Total Recoverable	Water	6020	315423
400-124709-5	FB-1(AP)	Total Recoverable	Water	6020	315423
400-124709-6	WGWA-6	Total Recoverable	Water	6020	315423
400-124709-7	WGWA-5	Total Recoverable	Water	6020	315423
400-124709-8	WGWA-3	Total Recoverable	Water	6020	315423
400-124709-9	WGWA-4	Total Recoverable	Water	6020	315423
400-124709-10	FD-1(AP)	Total Recoverable	Water	6020	315423
400-124709-11	WGWC-17	Total Recoverable	Water	6020	315423
400-124709-12	WGWC-14	Total Recoverable	Water	6020	315423
400-124709-13	WGWC-13	Total Recoverable	Water	6020	315423
400-124709-14	WGWC-11	Total Recoverable	Water	6020	315423
400-124709-15	WGWC-10	Total Recoverable	Water	6020	315423
400-124709-16	FD-2(AP)	Total Recoverable	Water	6020	315423
400-124709-17	FB-2(AP)	Total Recoverable	Water	6020	315423
400-124709-18	EB-1(AP)	Total Recoverable	Water	6020	315423
400-124709-19	EB-2(AP)	Total Recoverable	Water	6020	315423
400-124709-20	WGWC-12	Total Recoverable	Water	6020	315423
MB 400-315423/1-A ^5	Method Blank	Total Recoverable	Water	6020	315423
LCS 400-315423/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	315423
400-124709-8 MS	WGWA-3	Total Recoverable	Water	6020	315423
400-124709-8 MSD	WGWA-3	Total Recoverable	Water	6020	315423

## Analysis Batch: 316711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-5 - RA	FB-1(AP)	Total Recoverable	Water	6020	315423
400-124709-6 - RA	WGWA-6	Total Recoverable	Water	6020	315423
400-124709-7 - RA	WGWA-5	Total Recoverable	Water	6020	315423
400-124709-8 - RA	WGWA-3	Total Recoverable	Water	6020	315423

## General Chemistry

### Analysis Batch: 315446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-1	WGWA-1	Total/NA	Water	SM 2540C	
400-124709-2	WGWA-2	Total/NA	Water	SM 2540C	
400-124709-3	WGWA-7	Total/NA	Water	SM 2540C	
400-124709-4	WGWA-18	Total/NA	Water	SM 2540C	
400-124709-5	FB-1(AP)	Total/NA	Water	SM 2540C	
400-124709-6	WGWA-6	Total/NA	Water	SM 2540C	
400-124709-7	WGWA-5	Total/NA	Water	SM 2540C	
400-124709-22	WGWC-15	Total/NA	Water	SM 2540C	
400-124709-23	WGWC-16	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

## General Chemistry (Continued)

### Analysis Batch: 315446 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-315446/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-315446/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-124709-22 DU	WGWC-15	Total/NA	Water	SM 2540C	

### Analysis Batch: 315483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-8	WGWA-3	Total/NA	Water	SM 2540C	
400-124709-9	WGWA-4	Total/NA	Water	SM 2540C	
400-124709-10	FD-1(AP)	Total/NA	Water	SM 2540C	
400-124709-11	WGWC-17	Total/NA	Water	SM 2540C	
400-124709-12	WGWC-14	Total/NA	Water	SM 2540C	
400-124709-13	WGWC-13	Total/NA	Water	SM 2540C	
400-124709-14	WGWC-11	Total/NA	Water	SM 2540C	
400-124709-15	WGWC-10	Total/NA	Water	SM 2540C	
400-124709-16	FD-2(AP)	Total/NA	Water	SM 2540C	
400-124709-17	FB-2(AP)	Total/NA	Water	SM 2540C	
400-124709-18	EB-1(AP)	Total/NA	Water	SM 2540C	
400-124709-19	EB-2(AP)	Total/NA	Water	SM 2540C	
400-124709-20	WGWC-12	Total/NA	Water	SM 2540C	
400-124709-21	WGWC-9	Total/NA	Water	SM 2540C	
400-124709-24	WGWC-8	Total/NA	Water	SM 2540C	
MB 400-315483/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-315483/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-124709-8 DU	WGWA-3	Total/NA	Water	SM 2540C	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 400-315982/4**  
**Matrix: Water**  
**Analysis Batch: 315982**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			07/26/16 15:33	1
Fluoride	<0.082		0.20	0.082	mg/L			07/26/16 15:33	1
Sulfate	<0.70		1.0	0.70	mg/L			07/26/16 15:33	1

**Lab Sample ID: LCS 400-315982/5**  
**Matrix: Water**  
**Analysis Batch: 315982**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.77		mg/L		98	90 - 110
Fluoride	10.0	10.5		mg/L		105	90 - 110
Sulfate	10.0	10.2		mg/L		102	90 - 110

**Lab Sample ID: LCSD 400-315982/6**  
**Matrix: Water**  
**Analysis Batch: 315982**

**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	10.0	9.73		mg/L		97	90 - 110	0	15
Fluoride	10.0	10.5		mg/L		105	90 - 110	1	15
Sulfate	10.0	9.96		mg/L		100	90 - 110	2	15

**Lab Sample ID: 400-124709-9 MS**  
**Matrix: Water**  
**Analysis Batch: 315982**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.4		10.0	12.1		mg/L		106	80 - 120
Fluoride	0.17	J	10.0	11.6		mg/L		114	80 - 120
Sulfate	6.5		10.0	17.9		mg/L		114	80 - 120

**Lab Sample ID: 400-124898-B-7 MSD**  
**Matrix: Water**  
**Analysis Batch: 315982**

**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	<0.89		10.0	10.3		mg/L		103	80 - 120	0	20
Fluoride	<0.082		10.0	11.3		mg/L		113	80 - 120	1	20
Sulfate	<0.70		10.0	10.5		mg/L		105	80 - 120	2	20

**Lab Sample ID: MB 400-316018/4**  
**Matrix: Water**  
**Analysis Batch: 316018**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			07/27/16 12:06	1
Fluoride	<0.082		0.20	0.082	mg/L			07/27/16 12:06	1
Sulfate	<0.70		1.0	0.70	mg/L			07/27/16 12:06	1

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 400-316018/5**  
**Matrix: Water**  
**Analysis Batch: 316018**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.90		mg/L		99	90 - 110
Fluoride	10.0	10.6		mg/L		106	90 - 110
Sulfate	10.0	10.2		mg/L		102	90 - 110

**Lab Sample ID: LCSD 400-316018/6**  
**Matrix: Water**  
**Analysis Batch: 316018**

**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	10.0	9.93		mg/L		99	90 - 110	0	15
Fluoride	10.0	10.6		mg/L		106	90 - 110	0	15
Sulfate	10.0	10.4		mg/L		104	90 - 110	1	15

**Lab Sample ID: 400-124709-14 MS**  
**Matrix: Water**  
**Analysis Batch: 316018**

**Client Sample ID: WGWC-11**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	3.4		10.0	13.6		mg/L		102	80 - 120
Fluoride	<0.082		10.0	11.0		mg/L		110	80 - 120
Sulfate	1.6		10.0	12.4		mg/L		108	80 - 120

**Lab Sample ID: 400-124709-14 MSD**  
**Matrix: Water**  
**Analysis Batch: 316018**

**Client Sample ID: WGWC-11**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	3.4		10.0	13.4		mg/L		99	80 - 120	2	20
Fluoride	<0.082		10.0	10.9		mg/L		109	80 - 120	1	20
Sulfate	1.6		10.0	12.1		mg/L		105	80 - 120	3	20

**Lab Sample ID: 400-124709-24 MS**  
**Matrix: Water**  
**Analysis Batch: 316018**

**Client Sample ID: WGWC-8**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	19		10.0	30.0		mg/L		107	80 - 120
Fluoride	0.27		10.0	12.2		mg/L		119	80 - 120
Sulfate	150	E	10.0	158	E 4	mg/L		101	80 - 120

**Lab Sample ID: MB 400-316290/4**  
**Matrix: Water**  
**Analysis Batch: 316290**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			07/28/16 18:29	1
Fluoride	<0.082		0.20	0.082	mg/L			07/28/16 18:29	1
Sulfate	<0.70		1.0	0.70	mg/L			07/28/16 18:29	1

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 400-316290/5**  
**Matrix: Water**  
**Analysis Batch: 316290**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.78		mg/L		98	90 - 110
Fluoride	10.0	10.6		mg/L		106	90 - 110
Sulfate	10.0	10.1		mg/L		101	90 - 110

**Lab Sample ID: LCSD 400-316290/6**  
**Matrix: Water**  
**Analysis Batch: 316290**

**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	10.0	9.76		mg/L		98	90 - 110	0	15
Fluoride	10.0	10.5		mg/L		105	90 - 110	0	15
Sulfate	10.0	10.1		mg/L		101	90 - 110	0	15

**Lab Sample ID: 400-125086-A-4 MS**  
**Matrix: Water**  
**Analysis Batch: 316290**

**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	280	E	10.0	282	E 4	mg/L		58	80 - 120
Fluoride	<0.082		10.0	11.9		mg/L		119	80 - 120
Sulfate	640	E	10.0	658	E 4	mg/L		213	80 - 120

**Lab Sample ID: 400-125086-A-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 316290**

**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	280	E	10.0	283	E 4	mg/L		67	80 - 120	0	20
Fluoride	<0.082		10.0	11.9		mg/L		119	80 - 120	0	20
Sulfate	640	E	10.0	661	E 4	mg/L		244	80 - 120	0	20

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

**Lab Sample ID: MB 400-315423/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 316214**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 315423**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/26/16 09:00	07/28/16 18:17	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/26/16 09:00	07/28/16 18:17	5
Barium	<0.00049		0.0025	0.00049	mg/L		07/26/16 09:00	07/28/16 18:17	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 18:17	5
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/28/16 18:17	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/28/16 18:17	5
Calcium	<0.13		0.25	0.13	mg/L		07/26/16 09:00	07/28/16 18:17	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/28/16 18:17	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/26/16 09:00	07/28/16 18:17	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/28/16 18:17	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/26/16 09:00	07/28/16 18:17	5

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

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

**Lab Sample ID: MB 400-315423/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 316214**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 315423**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/26/16 09:00	07/28/16 18:17	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/28/16 18:17	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/28/16 18:17	5

**Lab Sample ID: LCS 400-315423/2-A ^1**  
**Matrix: Water**  
**Analysis Batch: 316214**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 315423**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0516		mg/L		103	80 - 120
Arsenic	0.0500	0.0534		mg/L		107	80 - 120
Barium	0.0500	0.0451		mg/L		90	80 - 120
Beryllium	0.0500	0.0470		mg/L		94	80 - 120
Boron	0.100	0.0859		mg/L		86	80 - 120
Cadmium	0.0500	0.0490		mg/L		98	80 - 120
Calcium	5.00	4.82		mg/L		96	80 - 120
Chromium	0.0500	0.0515		mg/L		103	80 - 120
Cobalt	0.0500	0.0496		mg/L		99	80 - 120
Lead	0.0500	0.0495		mg/L		99	80 - 120
Lithium	0.0500	0.0479		mg/L		96	80 - 120
Molybdenum	0.0500	0.0519		mg/L		104	80 - 120
Selenium	0.0500	0.0515		mg/L		103	80 - 120
Thallium	0.0100	0.0100		mg/L		100	80 - 120

**Lab Sample ID: 400-124709-8 MS**  
**Matrix: Water**  
**Analysis Batch: 316214**

**Client Sample ID: WGWA-3**  
**Prep Type: Total Recoverable**  
**Prep Batch: 315423**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0516		mg/L		103	75 - 125
Arsenic	<0.00046		0.0500	0.0525		mg/L		105	75 - 125
Barium	0.012		0.0500	0.0576		mg/L		91	75 - 125
Beryllium	<0.00034		0.0500	0.0471		mg/L		94	75 - 125
Boron	<0.021	L	0.100	0.101		mg/L		101	75 - 125
Cadmium	<0.00034		0.0500	0.0485		mg/L		97	75 - 125
Calcium	1.7		5.00	6.67		mg/L		100	75 - 125
Chromium	<0.0011		0.0500	0.0520		mg/L		104	75 - 125
Cobalt	<0.00040		0.0500	0.0518		mg/L		104	75 - 125
Lead	<0.00035		0.0500	0.0482		mg/L		96	75 - 125
Lithium	<0.0032		0.0500	0.0484		mg/L		97	75 - 125
Molybdenum	<0.00085		0.0500	0.0518		mg/L		104	75 - 125
Selenium	<0.00024		0.0500	0.0517		mg/L		103	75 - 125
Thallium	<0.000085		0.0100	0.00995		mg/L		100	75 - 125

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

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

**Lab Sample ID: 400-124709-8 MSD**

**Matrix: Water**

**Analysis Batch: 316214**

**Client Sample ID: WGWA-3**

**Prep Type: Total Recoverable**

**Prep Batch: 315423**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Antimony	<0.0010		0.0500	0.0507		mg/L		101	75 - 125	2	20
Arsenic	<0.00046		0.0500	0.0533		mg/L		107	75 - 125	2	20
Barium	0.012		0.0500	0.0576		mg/L		91	75 - 125	0	20
Beryllium	<0.00034		0.0500	0.0471		mg/L		94	75 - 125	0	20
Boron	<0.021	L	0.100	0.0994		mg/L		99	75 - 125	1	20
Cadmium	<0.00034		0.0500	0.0483		mg/L		97	75 - 125	0	20
Calcium	1.7		5.00	6.69		mg/L		101	75 - 125	0	20
Chromium	<0.0011		0.0500	0.0511		mg/L		102	75 - 125	2	20
Cobalt	<0.00040		0.0500	0.0500		mg/L		100	75 - 125	3	20
Lead	<0.00035		0.0500	0.0475		mg/L		95	75 - 125	2	20
Lithium	<0.0032		0.0500	0.0480		mg/L		96	75 - 125	1	20
Molybdenum	<0.00085		0.0500	0.0524		mg/L		105	75 - 125	1	20
Selenium	<0.00024		0.0500	0.0517		mg/L		103	75 - 125	0	20
Thallium	<0.000085		0.0100	0.00990		mg/L		99	75 - 125	1	20

**Lab Sample ID: MB 400-315426/1-A ^5**

**Matrix: Water**

**Analysis Batch: 315911**

**Client Sample ID: Method Blank**

**Prep Type: Total Recoverable**

**Prep Batch: 315426**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/26/16 09:00	07/26/16 15:30	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/26/16 09:00	07/26/16 15:30	5
Barium	<0.00049		0.0025	0.00049	mg/L		07/26/16 09:00	07/26/16 15:30	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/26/16 15:30	5
Boron	<0.021		0.050	0.021	mg/L		07/26/16 09:00	07/26/16 15:30	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/26/16 09:00	07/26/16 15:30	5
Calcium	<0.13		0.25	0.13	mg/L		07/26/16 09:00	07/26/16 15:30	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/26/16 09:00	07/26/16 15:30	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/26/16 09:00	07/26/16 15:30	5
Lead	<0.00035		0.0013	0.00035	mg/L		07/26/16 09:00	07/26/16 15:30	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/26/16 09:00	07/26/16 15:30	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/26/16 09:00	07/26/16 15:30	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/26/16 09:00	07/26/16 15:30	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/26/16 09:00	07/26/16 15:30	5

**Lab Sample ID: LCS 400-315426/2-A ^1**

**Matrix: Water**

**Analysis Batch: 315911**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total Recoverable**

**Prep Batch: 315426**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0524		mg/L		105	80 - 120
Arsenic	0.0500	0.0546		mg/L		109	80 - 120
Barium	0.0500	0.0477		mg/L		95	80 - 120
Beryllium	0.0500	0.0470		mg/L		94	80 - 120
Boron	0.100	0.0984		mg/L		98	80 - 120
Cadmium	0.0500	0.0500		mg/L		100	80 - 120
Calcium	5.00	4.69		mg/L		94	80 - 120
Chromium	0.0500	0.0495		mg/L		99	80 - 120

TestAmerica Pensacola



# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

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

**Lab Sample ID: LCS 400-315426/2-A ^1**  
**Matrix: Water**  
**Analysis Batch: 315911**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 315426**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.0500	0.0485		mg/L		97	80 - 120
Lead	0.0500	0.0493		mg/L		99	80 - 120
Lithium	0.0500	0.0477		mg/L		95	80 - 120
Molybdenum	0.0500	0.0502		mg/L		100	80 - 120
Selenium	0.0500	0.0508		mg/L		102	80 - 120
Thallium	0.0100	0.00987		mg/L		99	80 - 120

**Lab Sample ID: 400-124804-C-1-C MS ^5**  
**Matrix: Water**  
**Analysis Batch: 315911**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 315426**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0541		mg/L		108	75 - 125
Arsenic	0.0014		0.0500	0.0583		mg/L		114	75 - 125
Barium	0.096		0.0500	0.145		mg/L		100	75 - 125
Cadmium	<0.00034		0.0500	0.0496		mg/L		99	75 - 125
Calcium	17		5.00	21.5		mg/L		99	75 - 125
Chromium	<0.0011		0.0500	0.0508		mg/L		102	75 - 125
Cobalt	0.0069		0.0500	0.0575		mg/L		101	75 - 125
Lead	<0.00035		0.0500	0.0500		mg/L		100	75 - 125
Molybdenum	<0.00085		0.0500	0.0529		mg/L		106	75 - 125
Selenium	<0.00024		0.0500	0.0524		mg/L		105	75 - 125
Thallium	<0.00085		0.0100	0.0102		mg/L		102	75 - 125

**Lab Sample ID: 400-124804-C-1-D MSD ^5**  
**Matrix: Water**  
**Analysis Batch: 315911**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 315426**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0523		mg/L		105	75 - 125	3	20
Arsenic	0.0014		0.0500	0.0567		mg/L		111	75 - 125	3	20
Barium	0.096		0.0500	0.141		mg/L		92	75 - 125	3	20
Cadmium	<0.00034		0.0500	0.0503		mg/L		101	75 - 125	1	20
Calcium	17		5.00	21.0		mg/L		88	75 - 125	2	20
Chromium	<0.0011		0.0500	0.0493		mg/L		99	75 - 125	3	20
Cobalt	0.0069		0.0500	0.0552		mg/L		96	75 - 125	4	20
Lead	<0.00035		0.0500	0.0491		mg/L		98	75 - 125	2	20
Molybdenum	<0.00085		0.0500	0.0507		mg/L		101	75 - 125	4	20
Selenium	<0.00024		0.0500	0.0510		mg/L		102	75 - 125	3	20
Thallium	<0.00085		0.0100	0.0100		mg/L		100	75 - 125	2	20

## Method: 6020 - Metals (ICP/MS) - RA

**Lab Sample ID: 400-124804-C-1-C MS ^5**  
**Matrix: Water**  
**Analysis Batch: 316086**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 315426**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium - RA	<0.00034		0.0500	0.0503		mg/L		101	75 - 125

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

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

**Lab Sample ID: 400-124804-C-1-C MS ^5**  
**Matrix: Water**  
**Analysis Batch: 316086**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 315426**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron - RA	0.024	J	0.100	0.124		mg/L		100	75 - 125
Lithium - RA	<0.0032		0.0500	0.0499		mg/L		100	75 - 125

**Lab Sample ID: 400-124804-C-1-D MSD ^5**  
**Matrix: Water**  
**Analysis Batch: 316086**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 315426**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Beryllium - RA	<0.00034		0.0500	0.0487		mg/L		97	75 - 125	3	20
Boron - RA	0.024	J	0.100	0.124		mg/L		100	75 - 125	0	20
Lithium - RA	<0.0032		0.0500	0.0499		mg/L		100	75 - 125	0	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 400-315008/14-A**  
**Matrix: Water**  
**Analysis Batch: 315277**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 315008**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000950	J	0.00020	0.000070	mg/L		07/20/16 09:33	07/21/16 13:30	1

**Lab Sample ID: LCS 400-315008/15-A**  
**Matrix: Water**  
**Analysis Batch: 315277**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 315008**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.000913		mg/L		91	80 - 120

**Lab Sample ID: 400-124627-D-12-B MS**  
**Matrix: Water**  
**Analysis Batch: 315277**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 315008**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00010	J B	0.00201	0.00194		mg/L		91	80 - 120

**Lab Sample ID: 400-124627-E-12-A MSD**  
**Matrix: Water**  
**Analysis Batch: 315277**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 315008**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Mercury	0.00010	J B	0.00201	0.00201		mg/L		95	80 - 120	4	20

**Lab Sample ID: MB 400-315161/14-A**  
**Matrix: Water**  
**Analysis Batch: 315624**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 315161**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000708	J	0.00020	0.000070	mg/L		07/21/16 08:54	07/25/16 09:43	1

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

## Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID: LCS 400-315161/15-A**  
**Matrix: Water**  
**Analysis Batch: 315624**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 315161**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.000987		mg/L		98	80 - 120

**Lab Sample ID: 400-124738-H-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 315624**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 315161**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00164		mg/L		82	80 - 120

**Lab Sample ID: 400-124738-H-1-C MSD**  
**Matrix: Water**  
**Analysis Batch: 315624**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 315161**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00169		mg/L		84	80 - 120	3	20

**Lab Sample ID: MB 400-315288/14-A**  
**Matrix: Water**  
**Analysis Batch: 315624**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 315288**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000737	J	0.00020	0.000070	mg/L		07/21/16 16:44	07/25/16 13:01	1

**Lab Sample ID: LCS 400-315288/15-A**  
**Matrix: Water**  
**Analysis Batch: 315624**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 315288**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.000954		mg/L		95	80 - 120

**Lab Sample ID: 400-124709-20 MS**  
**Matrix: Water**  
**Analysis Batch: 315624**

**Client Sample ID: WGWC-12**  
**Prep Type: Total/NA**  
**Prep Batch: 315288**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00011	J B	0.00201	0.00186		mg/L		87	80 - 120

**Lab Sample ID: 400-124709-20 MSD**  
**Matrix: Water**  
**Analysis Batch: 315624**

**Client Sample ID: WGWC-12**  
**Prep Type: Total/NA**  
**Prep Batch: 315288**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.00011	J B	0.00201	0.00190		mg/L		89	80 - 120	2	20

**Lab Sample ID: MB 400-315392/14-A**  
**Matrix: Water**  
**Analysis Batch: 315624**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 315392**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000918	J	0.00020	0.000070	mg/L		07/22/16 11:48	07/25/16 11:57	1

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
SDG: Ash Pond

**Lab Sample ID: LCS 400-315392/15-A**  
**Matrix: Water**  
**Analysis Batch: 315624**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 315392**  
**%Rec. Limits**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.000926		mg/L		92	80 - 120

**Lab Sample ID: 400-124841-B-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 315624**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 315392**  
**%Rec. Limits**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	0.000097	J B	0.00201	0.00186		mg/L		88	80 - 120

**Lab Sample ID: 400-124841-B-1-C MSD**  
**Matrix: Water**  
**Analysis Batch: 315624**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 315392**  
**%Rec. RPD Limit**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.000097	J B	0.00201	0.00187		mg/L		88	80 - 120	0	20

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

**Lab Sample ID: MB 400-315446/1**  
**Matrix: Water**  
**Analysis Batch: 315446**

**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			07/22/16 18:00	1

**Lab Sample ID: LCS 400-315446/2**  
**Matrix: Water**  
**Analysis Batch: 315446**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**%Rec. Limits**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	293	264		mg/L		90	78 - 122

**Lab Sample ID: 400-124709-22 DU**  
**Matrix: Water**  
**Analysis Batch: 315446**

**Client Sample ID: WGWC-15**  
**Prep Type: Total/NA**  
**RPD Limit**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	180		184		mg/L		0	5

**Lab Sample ID: MB 400-315483/1**  
**Matrix: Water**  
**Analysis Batch: 315483**

**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			07/23/16 12:51	1

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
 SDG: Ash Pond

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

**Lab Sample ID: LCS 400-315483/2**  
**Matrix: Water**  
**Analysis Batch: 315483**

**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: 400-124709-8 DU**  
**Matrix: Water**  
**Analysis Batch: 315483**

**Client Sample ID: WGWA-3**  
**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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
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TestAmerica Pensacola  
 3355 McLemore Drive  
 Pensacola, FL 32514  
 Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact: Jolju Abraham  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: CCR Plant Wansley  
 Site: Ash Pond

Sample: Golder  
 Phone: 770-496-1893  
 Email: cheyenne.whitmore@testamericainc.com

Lab No: 7  
 Lab P/N: Kristen Jurinko, Chris Gargan, Bentholes, Travis Martinez  
 Carrier Tracking No(s):  
 Page: 1 of 2  
 Job #: 400-57038-24706.4

Due Date Requested:  
 TAT Requested (days):  
 PO #: GPC10624814  
 WO #:  
 Project #: 40007041  
 SSOW#:

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (Q-comp, G-grab)	Matrix (Water, Swill, Grab, etc)	Preservation (T, M, A, etc)	Retention Code	Special Instructions/Note
WGWA-3	7/20/16	1032	G	Water		3	
WGWA-4	7/20/16	1105	G	Water		3	
FD-1(AP)	7/20/16	-	G	Water		3	
WGWC-17	7/20/16	1253	G	Water		3	
WGWC-14	7/20/16	1230	G	Water		3	
WGWC-13	7/20/16	1120	G	Water		3	
WGWC-11	7/20/16	1440	G	Water		3	
WGWC-10	7/20/16	1335	G	Water		3	
FD-2(AP)	7/20/16	-	G	Water		3	
FB-2(AP)	7/20/16	1115	G	Water		3	
EB-1(AP)	7/20/16	0945	G	Water		3	

Retention 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 - Na2O3  
 Q - Na2CO3  
 R - Na2SO3  
 S - H2SO4  
 T - TSP Dodecahydrate  
 U - Acetone  
 V - MCAA  
 W - pH 4.5  
 Z - other (specify)

Special Instructions/Note:  
 2549C - Total Dissolved Solids  
 6020, 7470A  
 App III + IV  
 9315 Ra226, 9320 Ra228  
 400-124709 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/OC Requirements:  
 Method of Sealing:  
 Date: 7/20/16 1730  
 Date time: 7/20/16 09:47  
 Received by: [Signature]  
 Received by: [Signature]

Company: Southern Company  
 Date: 7/20/16 1730  
 Date time: 7/20/16 09:47  
 Received by: [Signature]  
 Received by: [Signature]

Custody Seal Intact: Yes  
 Custody Seal No. 136019016006002006







# Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-124709-1

SDG Number: Ash Pond

**Login Number: 124709**

**List Number: 1**

**Creator: Janish, Carl M**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.5°C, 3.1°C, 2.8°C, 1.2°C, 0.1°C, 0.1°C, 0.0°C, 0.0°C, 0.0°C, 0.7°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.	N/A	
Residual Chlorine Checked.	N/A	



# Certification Summary

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-1  
 SDG: Ash Pond

## 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

\* 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: 400-124709-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Plant Wansley

For:

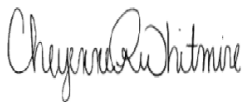
Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

8/30/2016 4:15:46 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

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

### LINKS

Review your project  
results through

TotalAccess

Have a Question?



Visit us at:

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

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

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

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

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# Case Narrative

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

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**Job ID: 400-124709-2**

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**Laboratory: TestAmerica Pensacola**

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**Narrative**

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**Job Narrative  
400-124709-2**

**RAD**

Method(s) 9320: Radium-228 Prep Batch: 160-265513. The absolute value of the negative result for the following sample is outside the three sigma uncertainty: FB-1(AP) (400-124709-5). A recount was not possible due to the passing of a full decay cycle of actinium-228. The data has been qualified and reported.

Method(s) PrecSep\_0: Insufficient sample volume was available to perform a sample duplicate (DUP) associated with analytical batch 160-265513. A lab control sample/lab control sample duplicate (LCS/LCSD) was prepared instead.

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# Method Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

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 Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-124709-1	WGWA-1	Water	07/19/16 12:15	07/20/16 09:26
400-124709-2	WGWA-2	Water	07/19/16 13:15	07/20/16 09:26
400-124709-3	WGWA-7	Water	07/19/16 12:45	07/20/16 09:26
400-124709-4	WGWA-18	Water	07/19/16 12:29	07/20/16 09:26
400-124709-5	FB-1(AP)	Water	07/19/16 12:20	07/20/16 09:26
400-124709-6	WGWA-6	Water	07/19/16 15:40	07/20/16 09:26
400-124709-7	WGWA-5	Water	07/19/16 15:29	07/20/16 09:26
400-124709-8	WGWA-3	Water	07/20/16 10:32	07/21/16 09:47
400-124709-9	WGWA-4	Water	07/20/16 11:05	07/21/16 09:47
400-124709-10	FD-1(AP)	Water	07/20/16 00:00	07/21/16 09:47
400-124709-11	WGWC-17	Water	07/20/16 12:53	07/21/16 09:47
400-124709-12	WGWC-14	Water	07/20/16 12:30	07/21/16 09:47
400-124709-13	WGWC-13	Water	07/20/16 11:20	07/21/16 09:47
400-124709-14	WGWC-11	Water	07/20/16 14:40	07/21/16 09:47
400-124709-15	WGWC-10	Water	07/20/16 13:35	07/21/16 09:47
400-124709-16	FD-2(AP)	Water	07/20/16 00:00	07/21/16 09:47
400-124709-17	FB-2(AP)	Water	07/20/16 11:15	07/21/16 09:47
400-124709-18	EB-1(AP)	Water	07/20/16 09:45	07/21/16 09:47
400-124709-19	EB-2(AP)	Water	07/20/16 11:40	07/21/16 09:47
400-124709-20	WGWC-12	Water	07/20/16 15:05	07/21/16 09:47
400-124709-21	WGWC-9	Water	07/20/16 14:52	07/21/16 09:47
400-124709-22	WGWC-15	Water	07/19/16 16:15	07/21/16 09:47
400-124709-23	WGWC-16	Water	07/19/16 16:10	07/21/16 09:47
400-124709-24	WGWC-8	Water	07/20/16 15:40	07/22/16 09:12



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: WGWA-1**

**Lab Sample ID: 400-124709-1**

**Date Collected: 07/19/16 12:15**

**Matrix: Water**

**Date Received: 07/20/16 09:26**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	7.21		0.419	0.773	1.00	0.0978	pCi/L	07/29/16 15:27	08/22/16 07:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					07/29/16 15:27	08/22/16 07:28	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0345	U	0.297	0.297	1.00	0.529	pCi/L	08/18/16 17:46	08/22/16 17:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.6		40 - 110					08/18/16 17:46	08/22/16 17:15	1
Y Carrier	83.7		40 - 110					08/18/16 17:46	08/22/16 17:15	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	7.25		0.514	0.828	5.00	0.529	pCi/L		08/30/16 14:58	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: WGWA-2**

**Lab Sample ID: 400-124709-2**

**Date Collected: 07/19/16 13:15**

**Matrix: Water**

**Date Received: 07/20/16 09:26**

### 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		0.0778	0.0789	1.00	0.101	pCi/L	07/29/16 15:27	08/22/16 07:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.8		40 - 110					07/29/16 15:27	08/22/16 07:28	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0207	U	0.402	0.402	1.00	0.727	pCi/L	08/18/16 17:46	08/22/16 17:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	66.4		40 - 110					08/18/16 17:46	08/22/16 17:15	1
Y Carrier	86.0		40 - 110					08/18/16 17:46	08/22/16 17:15	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.121	U	0.409	0.409	5.00	0.727	pCi/L		08/30/16 14:58	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: WGWA-7**

**Lab Sample ID: 400-124709-3**

**Date Collected: 07/19/16 12:45**

**Matrix: Water**

**Date Received: 07/20/16 09:26**

### 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	U	0.0981	0.0989	1.00	0.148	pCi/L	07/29/16 15:27	08/22/16 07:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					07/29/16 15:27	08/22/16 07:28	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.232	U	0.375	0.376	1.00	0.634	pCi/L	08/18/16 17:46	08/22/16 17:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.1		40 - 110					08/18/16 17:46	08/22/16 17:15	1
Y Carrier	84.1		40 - 110					08/18/16 17:46	08/22/16 17:15	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.369	U	0.388	0.389	5.00	0.634	pCi/L		08/30/16 14:58	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: WGWA-18**

**Date Collected: 07/19/16 12:29**

**Date Received: 07/20/16 09:26**

**Lab Sample ID: 400-124709-4**

**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	0.135		0.0762	0.0772	1.00	0.0981	pCi/L	07/29/16 15:27	08/22/16 07:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.9		40 - 110					07/29/16 15:27	08/22/16 07:28	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.135	U	0.353	0.353	1.00	0.609	pCi/L	08/24/16 17:39	08/29/16 16:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					08/24/16 17:39	08/29/16 16:16	1
Y Carrier	83.0		40 - 110					08/24/16 17:39	08/29/16 16:16	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.270	U	0.361	0.362	5.00	0.609	pCi/L		08/30/16 14:58	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: FB-1(AP)**

**Lab Sample ID: 400-124709-5**

**Date Collected: 07/19/16 12:20**

**Matrix: Water**

**Date Received: 07/20/16 09:26**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0518	U	0.0764	0.0766	1.00	0.130	pCi/L	07/29/16 15:27	08/22/16 07:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					07/29/16 15:27	08/22/16 07:28	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.579	U	0.358	0.361	1.00	0.733	pCi/L	08/18/16 17:46	08/22/16 17:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.3		40 - 110					08/18/16 17:46	08/22/16 17:16	1
Y Carrier	80.7		40 - 110					08/18/16 17:46	08/22/16 17:16	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.527	U	0.366	0.370	5.00	0.733	pCi/L		08/30/16 14:58	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-124709-6**

**Date Collected: 07/19/16 15:40**

**Matrix: Water**

**Date Received: 07/20/16 09:26**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.22		0.288	0.408	1.00	0.111	pCi/L	07/29/16 15:27	08/22/16 07:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.2		40 - 110					07/29/16 15:27	08/22/16 07:28	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.47		0.670	0.787	1.00	0.665	pCi/L	08/18/16 17:46	08/22/16 17:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.9		40 - 110					08/18/16 17:46	08/22/16 17:16	1
Y Carrier	79.6		40 - 110					08/18/16 17:46	08/22/16 17:16	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	7.69		0.730	0.886	5.00	0.665	pCi/L		08/30/16 14:58	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: WGWA-5**

**Date Collected: 07/19/16 15:29**

**Date Received: 07/20/16 09:26**

**Lab Sample ID: 400-124709-7**

**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	0.0845	U	0.0779	0.0783	1.00	0.122	pCi/L	07/29/16 15:27	08/22/16 07:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.6		40 - 110					07/29/16 15:27	08/22/16 07:28	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.348	U	0.387	0.388	1.00	0.634	pCi/L	08/18/16 17:46	08/22/16 17:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110					08/18/16 17:46	08/22/16 17:16	1
Y Carrier	81.1		40 - 110					08/18/16 17:46	08/22/16 17:16	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.433	U	0.394	0.396	5.00	0.634	pCi/L		08/30/16 14:58	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: WGWA-3**

**Lab Sample ID: 400-124709-8**

**Date Collected: 07/20/16 10:32**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.132		0.0704	0.0714	1.00	0.0886	pCi/L	07/29/16 15:27	08/22/16 07:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					07/29/16 15:27	08/22/16 07:51	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.266	U	0.384	0.385	1.00	0.644	pCi/L	08/18/16 17:46	08/22/16 17:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110					08/18/16 17:46	08/22/16 17:16	1
Y Carrier	80.0		40 - 110					08/18/16 17:46	08/22/16 17:16	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.398	U	0.391	0.392	5.00	0.644	pCi/L		08/30/16 14:58	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-124709-9**

**Date Collected: 07/20/16 11:05**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.432		0.110	0.116	1.00	0.0855	pCi/L	07/29/16 15:27	08/22/16 07:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.9		40 - 110					07/29/16 15:27	08/22/16 07:51	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.380	U	0.452	0.453	1.00	0.746	pCi/L	08/18/16 17:46	08/22/16 17:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	67.8		40 - 110					08/18/16 17:46	08/22/16 17:16	1
Y Carrier	78.9		40 - 110					08/18/16 17:46	08/22/16 17:16	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.812		0.465	0.468	5.00	0.746	pCi/L		08/30/16 14:58	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: FD-1(AP)**

**Lab Sample ID: 400-124709-10**

**Date Collected: 07/20/16 00:00**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.318		0.109	0.113	1.00	0.128	pCi/L	07/29/16 15:27	08/22/16 07:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					07/29/16 15:27	08/22/16 07:51	1

**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	0.311	0.313	1.00	0.511	pCi/L	08/18/16 17:46	08/22/16 17:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					08/18/16 17:46	08/22/16 17:16	1
Y Carrier	85.6		40 - 110					08/18/16 17:46	08/22/16 17:16	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.595		0.330	0.332	5.00	0.511	pCi/L		08/30/16 14:58	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-124709-11**

**Date Collected: 07/20/16 12:53**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0861	U	0.0730	0.0734	1.00	0.111	pCi/L	07/29/16 15:27	08/22/16 07:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.3		40 - 110					07/29/16 15:27	08/22/16 07:51	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.161	U	0.401	0.401	1.00	0.688	pCi/L	08/18/16 17:46	08/22/16 17:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.2		40 - 110					08/18/16 17:46	08/22/16 17:16	1
Y Carrier	85.2		40 - 110					08/18/16 17:46	08/22/16 17:16	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.247	U	0.408	0.408	5.00	0.688	pCi/L		08/30/16 14:58	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: WGWC-14**

**Date Collected: 07/20/16 12:30**

**Date Received: 07/21/16 09:47**

**Lab Sample ID: 400-124709-12**

**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	0.812		0.154	0.170	1.00	0.125	pCi/L	07/29/16 15:27	08/22/16 07:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.5		40 - 110					07/29/16 15:27	08/22/16 07:51	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.401	U	0.343	0.345	1.00	0.546	pCi/L	08/18/16 17:46	08/22/16 17:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					08/18/16 17:46	08/22/16 17:16	1
Y Carrier	82.6		40 - 110					08/18/16 17:46	08/22/16 17:16	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.21		0.376	0.384	5.00	0.546	pCi/L		08/30/16 14:58	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-124709-13**

Date Collected: 07/20/16 11:20

Matrix: Water

Date Received: 07/21/16 09:47

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.362		0.0990	0.104	1.00	0.0842	pCi/L	07/29/16 15:27	08/22/16 07:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					07/29/16 15:27	08/22/16 07:50	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0414	U	0.321	0.321	1.00	0.568	pCi/L	08/18/16 17:46	08/22/16 17:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.9		40 - 110					08/18/16 17:46	08/22/16 17:16	1
Y Carrier	88.2		40 - 110					08/18/16 17:46	08/22/16 17:16	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.404	U	0.336	0.337	5.00	0.568	pCi/L		08/30/16 14:58	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-124709-14**

**Date Collected: 07/20/16 14:40**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00117	U	0.0626	0.0626	1.00	0.120	pCi/L	07/29/16 15:27	08/22/16 07:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					07/29/16 15:27	08/22/16 07:50	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.264	U	0.288	0.289	1.00	0.566	pCi/L	08/18/16 17:46	08/22/16 17:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.9		40 - 110					08/18/16 17:46	08/22/16 17:16	1
Y Carrier	85.6		40 - 110					08/18/16 17:46	08/22/16 17:16	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.263	U	0.295	0.296	5.00	0.566	pCi/L		08/30/16 14:58	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-124709-15**

**Date Collected: 07/20/16 13:35**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0380	U	0.0535	0.0536	1.00	0.0907	pCi/L	07/29/16 15:27	08/22/16 07:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					07/29/16 15:27	08/22/16 07:50	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.173	U	0.360	0.360	1.00	0.667	pCi/L	08/18/16 17:46	08/22/16 17:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					08/18/16 17:46	08/22/16 17:16	1
Y Carrier	81.5		40 - 110					08/18/16 17:46	08/22/16 17:16	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.135	U	0.364	0.364	5.00	0.667	pCi/L		08/30/16 14:58	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: FD-2(AP)**

**Lab Sample ID: 400-124709-16**

**Date Collected: 07/20/16 00:00**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.288		0.0966	0.100	1.00	0.101	pCi/L	07/29/16 15:27	08/22/16 07:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					07/29/16 15:27	08/22/16 07:50	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.269	U	0.320	0.321	1.00	0.528	pCi/L	08/18/16 17:46	08/22/16 17:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					08/18/16 17:46	08/22/16 17:16	1
Y Carrier	84.1		40 - 110					08/18/16 17:46	08/22/16 17:16	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.557		0.334	0.336	5.00	0.528	pCi/L		08/30/16 14:58	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: FB-2(AP)**

**Lab Sample ID: 400-124709-17**

**Date Collected: 07/20/16 11:15**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0857	U	0.0628	0.0633	1.00	0.0902	pCi/L	07/29/16 15:27	08/22/16 07:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					07/29/16 15:27	08/22/16 07:50	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.125	U	0.266	0.266	1.00	0.506	pCi/L	08/18/16 17:46	08/22/16 17:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					08/18/16 17:46	08/22/16 17:17	1
Y Carrier	84.5		40 - 110					08/18/16 17:46	08/22/16 17:17	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0394	U	0.273	0.274	5.00	0.506	pCi/L		08/30/16 14:58	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: EB-1(AP)**

**Lab Sample ID: 400-124709-18**

**Date Collected: 07/20/16 09:45**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.00574	U	0.0724	0.0724	1.00	0.138	pCi/L	07/29/16 15:27	08/22/16 07:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		40 - 110					07/29/16 15:27	08/22/16 07:50	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0700	U	0.260	0.260	1.00	0.486	pCi/L	08/18/16 17:46	08/22/16 17:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		40 - 110					08/18/16 17:46	08/22/16 17:17	1
Y Carrier	86.0		40 - 110					08/18/16 17:46	08/22/16 17:17	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0757	U	0.270	0.270	5.00	0.486	pCi/L		08/30/16 14:58	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: EB-2(AP)**

**Lab Sample ID: 400-124709-19**

**Date Collected: 07/20/16 11:40**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0835		0.0577	0.0581	1.00	0.0787	pCi/L	07/29/16 15:27	08/22/16 07:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					07/29/16 15:27	08/22/16 07:50	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0627	U	0.339	0.339	1.00	0.593	pCi/L	08/18/16 17:46	08/22/16 17:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					08/18/16 17:46	08/22/16 17:17	1
Y Carrier	87.5		40 - 110					08/18/16 17:46	08/22/16 17:17	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.146	U	0.344	0.344	5.00	0.593	pCi/L		08/30/16 14:58	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-124709-20**

**Date Collected: 07/20/16 15:05**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0904	U	0.0807	0.0811	1.00	0.127	pCi/L	07/29/16 15:27	08/22/16 07:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					07/29/16 15:27	08/22/16 07:50	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.155	U	0.332	0.332	1.00	0.616	pCi/L	08/18/16 17:46	08/22/16 17:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					08/18/16 17:46	08/22/16 17:17	1
Y Carrier	87.5		40 - 110					08/18/16 17:46	08/22/16 17:17	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0646	U	0.342	0.342	5.00	0.616	pCi/L		08/30/16 14:58	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-124709-21**

**Date Collected: 07/20/16 14:52**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0480	U	0.0838	0.0839	1.00	0.144	pCi/L	07/28/16 16:35	08/19/16 04:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					07/28/16 16:35	08/19/16 04:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.132	U	0.219	0.220	1.00	0.411	pCi/L	07/28/16 17:23	08/15/16 12:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					07/28/16 17:23	08/15/16 12:31	1
Y Carrier	88.2		40 - 110					07/28/16 17:23	08/15/16 12:31	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0840	U	0.235	0.235	5.00	0.411	pCi/L		08/30/16 14:58	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-124709-22**

**Date Collected: 07/19/16 16:15**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0548	U	0.0518	0.0520	1.00	0.0791	pCi/L	07/28/16 16:35	08/19/16 04:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					07/28/16 16:35	08/19/16 04:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.235	U	0.233	0.234	1.00	0.379	pCi/L	07/28/16 17:23	08/15/16 12:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					07/28/16 17:23	08/15/16 12:31	1
Y Carrier	90.1		40 - 110					07/28/16 17:23	08/15/16 12:31	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.290	U	0.239	0.240	5.00	0.379	pCi/L		08/30/16 14:58	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-124709-23**

**Date Collected: 07/19/16 16:10**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.788		0.154	0.169	1.00	0.131	pCi/L	07/28/16 16:35	08/19/16 04:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.5		40 - 110					07/28/16 16:35	08/19/16 04:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.60		0.345	0.375	1.00	0.411	pCi/L	07/28/16 17:23	08/15/16 12:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.5		40 - 110					07/28/16 17:23	08/15/16 12:31	1
Y Carrier	90.5		40 - 110					07/28/16 17:23	08/15/16 12:31	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.39		0.377	0.411	5.00	0.411	pCi/L		08/30/16 14:58	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-124709-24**

**Date Collected: 07/20/16 15:40**

**Matrix: Water**

**Date Received: 07/22/16 09:12**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.414		0.124	0.129	1.00	0.136	pCi/L	07/28/16 16:35	08/19/16 04:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.0		40 - 110					07/28/16 16:35	08/19/16 04:43	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.729		0.279	0.287	1.00	0.388	pCi/L	07/28/16 17:23	08/15/16 12:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.0		40 - 110					07/28/16 17:23	08/15/16 12:32	1
Y Carrier	88.2		40 - 110					07/28/16 17:23	08/15/16 12:32	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.14		0.306	0.315	5.00	0.388	pCi/L		08/30/16 14:58	1



# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

## 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 Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

## Client Sample ID: WGWA-1

Date Collected: 07/19/16 12:15

Date Received: 07/20/16 09:26

## Lab Sample ID: 400-124709-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262736	07/29/16 15:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	265964	08/22/16 07:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			265513	08/18/16 17:46	MCJ	TAL SL
Total/NA	Analysis	9320		1	265960	08/22/16 17:15	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

## Client Sample ID: WGWA-2

Date Collected: 07/19/16 13:15

Date Received: 07/20/16 09:26

## Lab Sample ID: 400-124709-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262736	07/29/16 15:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	265964	08/22/16 07:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			265513	08/18/16 17:46	MCJ	TAL SL
Total/NA	Analysis	9320		1	265960	08/22/16 17:15	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

## Client Sample ID: WGWA-7

Date Collected: 07/19/16 12:45

Date Received: 07/20/16 09:26

## Lab Sample ID: 400-124709-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262736	07/29/16 15:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	265964	08/22/16 07:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			265513	08/18/16 17:46	MCJ	TAL SL
Total/NA	Analysis	9320		1	265960	08/22/16 17:15	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

## Client Sample ID: WGWA-18

Date Collected: 07/19/16 12:29

Date Received: 07/20/16 09:26

## Lab Sample ID: 400-124709-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262736	07/29/16 15:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	265964	08/22/16 07:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			266163	08/24/16 17:39	TJT	TAL SL
Total/NA	Analysis	9320		1	267066	08/29/16 16:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: FB-1(AP)**

**Lab Sample ID: 400-124709-5**

**Date Collected: 07/19/16 12:20**

**Matrix: Water**

**Date Received: 07/20/16 09:26**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262736	07/29/16 15:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	265964	08/22/16 07:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			265513	08/18/16 17:46	MCJ	TAL SL
Total/NA	Analysis	9320		1	265960	08/22/16 17:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-124709-6**

**Date Collected: 07/19/16 15:40**

**Matrix: Water**

**Date Received: 07/20/16 09:26**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262736	07/29/16 15:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	265964	08/22/16 07:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			265513	08/18/16 17:46	MCJ	TAL SL
Total/NA	Analysis	9320		1	265960	08/22/16 17:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

**Client Sample ID: WGWA-5**

**Lab Sample ID: 400-124709-7**

**Date Collected: 07/19/16 15:29**

**Matrix: Water**

**Date Received: 07/20/16 09:26**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262736	07/29/16 15:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	265964	08/22/16 07:28	RTM	TAL SL
Total/NA	Prep	PrecSep_0			265513	08/18/16 17:46	MCJ	TAL SL
Total/NA	Analysis	9320		1	265960	08/22/16 17:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

**Client Sample ID: WGWA-3**

**Lab Sample ID: 400-124709-8**

**Date Collected: 07/20/16 10:32**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262736	07/29/16 15:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	265960	08/22/16 07:51	RTM	TAL SL
Total/NA	Prep	PrecSep_0			265513	08/18/16 17:46	MCJ	TAL SL
Total/NA	Analysis	9320		1	265960	08/22/16 17:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-124709-9**

**Date Collected: 07/20/16 11:05**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262736	07/29/16 15:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	265960	08/22/16 07:51	RTM	TAL SL
Total/NA	Prep	PrecSep_0			265513	08/18/16 17:46	MCJ	TAL SL
Total/NA	Analysis	9320		1	265960	08/22/16 17:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

**Client Sample ID: FD-1(AP)**

**Lab Sample ID: 400-124709-10**

**Date Collected: 07/20/16 00:00**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262736	07/29/16 15:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	265960	08/22/16 07:51	RTM	TAL SL
Total/NA	Prep	PrecSep_0			265513	08/18/16 17:46	MCJ	TAL SL
Total/NA	Analysis	9320		1	265960	08/22/16 17:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-124709-11**

**Date Collected: 07/20/16 12:53**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262736	07/29/16 15:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	265960	08/22/16 07:51	RTM	TAL SL
Total/NA	Prep	PrecSep_0			265513	08/18/16 17:46	MCJ	TAL SL
Total/NA	Analysis	9320		1	265960	08/22/16 17:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

**Client Sample ID: WGWC-14**

**Lab Sample ID: 400-124709-12**

**Date Collected: 07/20/16 12:30**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262736	07/29/16 15:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	265960	08/22/16 07:51	RTM	TAL SL
Total/NA	Prep	PrecSep_0			265513	08/18/16 17:46	MCJ	TAL SL
Total/NA	Analysis	9320		1	265960	08/22/16 17:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-124709-13**

**Date Collected: 07/20/16 11:20**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262736	07/29/16 15:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	265960	08/22/16 07:50	RTM	TAL SL
Total/NA	Prep	PrecSep_0			265513	08/18/16 17:46	MCJ	TAL SL
Total/NA	Analysis	9320		1	265960	08/22/16 17:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-124709-14**

**Date Collected: 07/20/16 14:40**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262736	07/29/16 15:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	265960	08/22/16 07:50	RTM	TAL SL
Total/NA	Prep	PrecSep_0			265513	08/18/16 17:46	MCJ	TAL SL
Total/NA	Analysis	9320		1	265960	08/22/16 17:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-124709-15**

**Date Collected: 07/20/16 13:35**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262736	07/29/16 15:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	265960	08/22/16 07:50	RTM	TAL SL
Total/NA	Prep	PrecSep_0			265513	08/18/16 17:46	MCJ	TAL SL
Total/NA	Analysis	9320		1	265960	08/22/16 17:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

**Client Sample ID: FD-2(AP)**

**Lab Sample ID: 400-124709-16**

**Date Collected: 07/20/16 00:00**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262736	07/29/16 15:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	265960	08/22/16 07:50	RTM	TAL SL
Total/NA	Prep	PrecSep_0			265513	08/18/16 17:46	MCJ	TAL SL
Total/NA	Analysis	9320		1	265960	08/22/16 17:16	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: FB-2(AP)**

**Lab Sample ID: 400-124709-17**

**Date Collected: 07/20/16 11:15**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262736	07/29/16 15:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	265960	08/22/16 07:50	RTM	TAL SL
Total/NA	Prep	PrecSep_0			265513	08/18/16 17:46	MCJ	TAL SL
Total/NA	Analysis	9320		1	265960	08/22/16 17:17	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

**Client Sample ID: EB-1(AP)**

**Lab Sample ID: 400-124709-18**

**Date Collected: 07/20/16 09:45**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262736	07/29/16 15:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	265960	08/22/16 07:50	RTM	TAL SL
Total/NA	Prep	PrecSep_0			265513	08/18/16 17:46	MCJ	TAL SL
Total/NA	Analysis	9320		1	265960	08/22/16 17:17	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

**Client Sample ID: EB-2(AP)**

**Lab Sample ID: 400-124709-19**

**Date Collected: 07/20/16 11:40**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262736	07/29/16 15:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	265960	08/22/16 07:50	RTM	TAL SL
Total/NA	Prep	PrecSep_0			265513	08/18/16 17:46	MCJ	TAL SL
Total/NA	Analysis	9320		1	265959	08/22/16 17:17	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-124709-20**

**Date Collected: 07/20/16 15:05**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262736	07/29/16 15:27	MCJ	TAL SL
Total/NA	Analysis	9315		1	265960	08/22/16 07:50	RTM	TAL SL
Total/NA	Prep	PrecSep_0			265513	08/18/16 17:46	MCJ	TAL SL
Total/NA	Analysis	9320		1	265959	08/22/16 17:17	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-124709-21**

**Date Collected: 07/20/16 14:52**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262574	07/28/16 16:35	MCJ	TAL SL
Total/NA	Analysis	9315		1	265562	08/19/16 04:43	RTM	TAL SL
Total/NA	Prep	PrecSep_0			262577	07/28/16 17:23	MCJ	TAL SL
Total/NA	Analysis	9320		1	264773	08/15/16 12:31	JLW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-124709-22**

**Date Collected: 07/19/16 16:15**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262574	07/28/16 16:35	MCJ	TAL SL
Total/NA	Analysis	9315		1	265562	08/19/16 04:43	RTM	TAL SL
Total/NA	Prep	PrecSep_0			262577	07/28/16 17:23	MCJ	TAL SL
Total/NA	Analysis	9320		1	264773	08/15/16 12:31	JLW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-124709-23**

**Date Collected: 07/19/16 16:10**

**Matrix: Water**

**Date Received: 07/21/16 09:47**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262574	07/28/16 16:35	MCJ	TAL SL
Total/NA	Analysis	9315		1	265562	08/19/16 04:43	RTM	TAL SL
Total/NA	Prep	PrecSep_0			262577	07/28/16 17:23	MCJ	TAL SL
Total/NA	Analysis	9320		1	264773	08/15/16 12:31	JLW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	RTM	TAL SL

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-124709-24**

**Date Collected: 07/20/16 15:40**

**Matrix: Water**

**Date Received: 07/22/16 09:12**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			262574	07/28/16 16:35	MCJ	TAL SL
Total/NA	Analysis	9315		1	265562	08/19/16 04:43	RTM	TAL SL
Total/NA	Prep	PrecSep_0			262577	07/28/16 17:23	MCJ	TAL SL
Total/NA	Analysis	9320		1	264773	08/15/16 12:32	JLW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	267374	08/30/16 14:58	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 Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

## Rad

### Prep Batch: 262574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-21	WGWC-9	Total/NA	Water	PrecSep-21	
400-124709-22	WGWC-15	Total/NA	Water	PrecSep-21	
400-124709-23	WGWC-16	Total/NA	Water	PrecSep-21	
400-124709-24	WGWC-8	Total/NA	Water	PrecSep-21	
MB 160-262574/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-262574/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-124841-C-1-B DU	Duplicate	Total/NA	Water	PrecSep-21	

### Prep Batch: 262577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-21	WGWC-9	Total/NA	Water	PrecSep_0	
400-124709-22	WGWC-15	Total/NA	Water	PrecSep_0	
400-124709-23	WGWC-16	Total/NA	Water	PrecSep_0	
400-124709-24	WGWC-8	Total/NA	Water	PrecSep_0	
MB 160-262577/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-262577/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-124841-C-1-D DU	Duplicate	Total/NA	Water	PrecSep_0	

### Prep Batch: 262736

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-1	WGWA-1	Total/NA	Water	PrecSep-21	
400-124709-2	WGWA-2	Total/NA	Water	PrecSep-21	
400-124709-3	WGWA-7	Total/NA	Water	PrecSep-21	
400-124709-4	WGWA-18	Total/NA	Water	PrecSep-21	
400-124709-5	FB-1(AP)	Total/NA	Water	PrecSep-21	
400-124709-6	WGWA-6	Total/NA	Water	PrecSep-21	
400-124709-7	WGWA-5	Total/NA	Water	PrecSep-21	
400-124709-8	WGWA-3	Total/NA	Water	PrecSep-21	
400-124709-9	WGWA-4	Total/NA	Water	PrecSep-21	
400-124709-10	FD-1(AP)	Total/NA	Water	PrecSep-21	
400-124709-11	WGWC-17	Total/NA	Water	PrecSep-21	
400-124709-12	WGWC-14	Total/NA	Water	PrecSep-21	
400-124709-13	WGWC-13	Total/NA	Water	PrecSep-21	
400-124709-14	WGWC-11	Total/NA	Water	PrecSep-21	
400-124709-15	WGWC-10	Total/NA	Water	PrecSep-21	
400-124709-16	FD-2(AP)	Total/NA	Water	PrecSep-21	
400-124709-17	FB-2(AP)	Total/NA	Water	PrecSep-21	
400-124709-18	EB-1(AP)	Total/NA	Water	PrecSep-21	
400-124709-19	EB-2(AP)	Total/NA	Water	PrecSep-21	
400-124709-20	WGWC-12	Total/NA	Water	PrecSep-21	
MB 160-262736/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-262736/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-124709-4 DU	WGWA-18	Total/NA	Water	PrecSep-21	

### Prep Batch: 265513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-1	WGWA-1	Total/NA	Water	PrecSep_0	
400-124709-2	WGWA-2	Total/NA	Water	PrecSep_0	
400-124709-3	WGWA-7	Total/NA	Water	PrecSep_0	
400-124709-5	FB-1(AP)	Total/NA	Water	PrecSep_0	
400-124709-6	WGWA-6	Total/NA	Water	PrecSep_0	

TestAmerica Pensacola



# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

## Rad (Continued)

### Prep Batch: 265513 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-7	WGWA-5	Total/NA	Water	PrecSep_0	
400-124709-8	WGWA-3	Total/NA	Water	PrecSep_0	
400-124709-9	WGWA-4	Total/NA	Water	PrecSep_0	
400-124709-10	FD-1(AP)	Total/NA	Water	PrecSep_0	
400-124709-11	WGWC-17	Total/NA	Water	PrecSep_0	
400-124709-12	WGWC-14	Total/NA	Water	PrecSep_0	
400-124709-13	WGWC-13	Total/NA	Water	PrecSep_0	
400-124709-14	WGWC-11	Total/NA	Water	PrecSep_0	
400-124709-15	WGWC-10	Total/NA	Water	PrecSep_0	
400-124709-16	FD-2(AP)	Total/NA	Water	PrecSep_0	
400-124709-17	FB-2(AP)	Total/NA	Water	PrecSep_0	
400-124709-18	EB-1(AP)	Total/NA	Water	PrecSep_0	
400-124709-19	EB-2(AP)	Total/NA	Water	PrecSep_0	
400-124709-20	WGWC-12	Total/NA	Water	PrecSep_0	
MB 160-265513/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-265513/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-265513/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

### Prep Batch: 266163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-124709-4	WGWA-18	Total/NA	Water	PrecSep_0	
MB 160-266163/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-266163/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
240-68270-H-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep_0	
240-68270-L-1-B MS	Matrix Spike	Total/NA	Water	PrecSep_0	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

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

**Lab Sample ID: MB 160-262574/1-A**  
**Matrix: Water**  
**Analysis Batch: 265562**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 262574**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.002403	U	0.0455	0.0455	1.00	0.0918	pCi/L	07/28/16 16:35	08/19/16 04:43	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					07/28/16 16:35	08/19/16 04:43	1

**Lab Sample ID: LCS 160-262574/2-A**  
**Matrix: Water**  
**Analysis Batch: 265565**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 262574**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.2	14.02		1.38	1.00	0.121	pCi/L	126	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	93.4		40 - 110						

**Lab Sample ID: 400-124841-C-1-B DU**  
**Matrix: Water**  
**Analysis Batch: 265562**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 262574**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.000	U	0.1030		0.0709	1.00	0.100	pCi/L	0.76	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	88.0		40 - 110							

**Lab Sample ID: MB 160-262736/1-A**  
**Matrix: Water**  
**Analysis Batch: 265964**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 262736**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.04386	U	0.0594	0.0595	1.00	0.0998	pCi/L	07/29/16 15:27	08/22/16 07:27	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					07/29/16 15:27	08/22/16 07:27	1

**Lab Sample ID: LCS 160-262736/2-A**  
**Matrix: Water**  
**Analysis Batch: 265964**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 262736**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.2	8.181		0.851	1.00	0.0829	pCi/L	73	68 - 137

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

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

**Lab Sample ID: LCS 160-262736/2-A**  
**Matrix: Water**  
**Analysis Batch: 265964**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 262736**

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	91.2		40 - 110

**Lab Sample ID: 400-124709-4 DU**  
**Matrix: Water**  
**Analysis Batch: 265964**

**Client Sample ID: WGWA-18**  
**Prep Type: Total/NA**  
**Prep Batch: 262736**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.135		0.3270		0.113	1.00	0.124	pCi/L	1.01	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	86.9		40 - 110

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

**Lab Sample ID: MB 160-262577/1-A**  
**Matrix: Water**  
**Analysis Batch: 264773**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 262577**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.2429	U	0.196	0.197	1.00	0.389	pCi/L	07/28/16 17:23	08/15/16 12:31	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110	07/28/16 17:23	08/15/16 12:31	1
Y Carrier	90.8		40 - 110	07/28/16 17:23	08/15/16 12:31	1

**Lab Sample ID: LCS 160-262577/2-A**  
**Matrix: Water**  
**Analysis Batch: 264773**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 262577**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.7	15.64		1.65	1.00	0.382	pCi/L	106	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	93.4		40 - 110
Y Carrier	89.0		40 - 110

**Lab Sample ID: 400-124841-C-1-D DU**  
**Matrix: Water**  
**Analysis Batch: 264773**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 262577**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.339	U	0.1128	U	0.196	1.00	0.333	pCi/L	0.53	1

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

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

**Lab Sample ID: 400-124841-C-1-D DU**  
**Matrix: Water**  
**Analysis Batch: 264773**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 262577**

	DU	DU	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	88.0		40 - 110
Y Carrier	87.9		40 - 110

**Lab Sample ID: MB 160-265513/1-A**  
**Matrix: Water**  
**Analysis Batch: 265960**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 265513**

Analyte	MB	MB	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.03540	U	0.226	0.226	1.00	0.406	pCi/L	08/18/16 17:46	08/22/16 17:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.9		40 - 110					08/18/16 17:46	08/22/16 17:15	1
Y Carrier	87.5		40 - 110					08/18/16 17:46	08/22/16 17:15	1

**Lab Sample ID: LCS 160-265513/2-A**  
**Matrix: Water**  
**Analysis Batch: 265960**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 265513**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.7	16.09		1.75	1.00	0.395	pCi/L	110	56 - 140
Carrier	%Yield	Qualifier	Limits						
Ba Carrier	86.3		40 - 110						
Y Carrier	81.9		40 - 110						

**Lab Sample ID: LCSD 160-265513/3-A**  
**Matrix: Water**  
**Analysis Batch: 265960**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 265513**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	14.7	15.85		1.72	1.00	0.439	pCi/L	108	56 - 140	0.07	1
Carrier	%Yield	Qualifier	Limits								
Ba Carrier	84.0		40 - 110								
Y Carrier	88.6		40 - 110								

**Lab Sample ID: MB 160-266163/1-A**  
**Matrix: Water**  
**Analysis Batch: 267153**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 266163**

Analyte	MB	MB	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.1883	U	0.291	0.291	1.00	0.557	pCi/L	08/23/16 18:25	08/29/16 16:22	1

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

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

**Lab Sample ID: MB 160-266163/1-A**  
**Matrix: Water**  
**Analysis Batch: 267153**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 266163**

Carrier	<i>MB</i> %Yield	<i>MB</i> Qualifier	Limits
Ba Carrier	89.7		40 - 110
Y Carrier	86.7		40 - 110

Prepared	Analyzed	Dil Fac
08/23/16 18:25	08/29/16 16:22	1
08/23/16 18:25	08/29/16 16:22	1

**Lab Sample ID: LCS 160-266163/2-A**  
**Matrix: Water**  
**Analysis Batch: 267153**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 266163**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	19.5	21.45		2.33	1.00	0.566	pCi/L	110	56 - 140

Carrier	<i>LCS</i> %Yield	<i>LCS</i> Qualifier	Limits
Ba Carrier	90.9		40 - 110
Y Carrier	77.4		40 - 110

**Lab Sample ID: 240-68270-H-1-B MSD**  
**Matrix: Water**  
**Analysis Batch: 267153**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 266163**

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	0.162	U	19.5	20.05		2.18	1.00	0.608	pCi/L	103	45 - 150	0.07	1

Carrier	<i>MSD</i> %Yield	<i>MSD</i> Qualifier	Limits
Ba Carrier	92.6		40 - 110
Y Carrier	83.7		40 - 110

**Lab Sample ID: 240-68270-L-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 267153**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 266163**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	0.162	U	19.5	20.35		2.19	1.00	0.508	pCi/L	104	45 - 150

Carrier	<i>MS</i> %Yield	<i>MS</i> Qualifier	Limits
Ba Carrier	92.3		40 - 110
Y Carrier	86.0		40 - 110

**Chain of Custody Record**

**Client Information**  
 Client Contact: Jolu Abraham  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: CCR Plant Wansley  
 Site: Ash Pond

**Sample Information**  
 Sample: Golden  
 Lead Pkt: Whitfire, Cheyenne R  
 F-Mail: cheyenne.whitfire@testamericainc.com  
 Phone: 770-496-1893

**Due Date Requested:**  
**TAT Requested (days):**  
**PO #:** GPC10624814  
**WO #:**  
**Project #:** 40007041  
**SSOW#:**

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Soild, o-water, sl, etc)	Analysis Requested	Special Instructions/Note
WGWA-1	7/19/16	1215	G	Water	Metals App III + IV -A, F, SO4, PHOS	3
WGWA-2	7/19/16	1315		Water		3
WGWA-7	7/19/16	1245		Water		3
WGWA-18	7/19/16	1229		Water		3
FB-1 (AP)	7/19/16	1220		Water		3
WGWA-6	7/19/16	1540		Water		3
WGWA-5	7/19/16	1529		Water		3
				Water		
				Water		
				Water		
				Water		

**Possible Hazard Identification**  
 Non-Hazard  
 Flammable  
 Skin Irritant  
 Poison B  
 Unknown  
 Radiological

**Deliverable Requested:** i, ii, iii, IV, Other (specify)

**Empty Kit Relinquished by:**  
 Relinquished by: Kristen Junko  
 Date/Time: 7/19/16 1730  
 Company: Golden

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  
 Disposal By Lab  
 Archive For \_\_\_\_\_ months

**Special Instructions/OC Requirements:**

**Method of Shipment:**  
 Date/Time: 7/19/16 0921  
 Company: Golden

**Received by:**  
 Date/Time: 7/19/16 1730  
 Company: Golden

**Received by:**  
 Date/Time: 7/19/16 1730  
 Company: Golden

**Received by:**  
 Date/Time: 7/19/16 1730  
 Company: Golden

**Custody Seal Intact:** Yes  No   
**Custody Seal No.:** 25,31,2,8 + 26



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

Chain of Custody Record

TestAmerica  
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information  
 Sample: **Golder**  
 Lab Pkt. # **Whitfire, Cheyenne R**  
 Client Contact: **Joju Abraham**  
 Phone: **770-496-1893**  
 Email: **cheyenne.whitfire@testamericainc.com**

Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: GPC:10624814  
 Email: JAbraham@southernco.com  
 Project #: 40007041  
 CCR Plant: Wansley  
 Site: **Asn Pond**

Due Date Requested:  
 TAT Requested (days):  
 PO #:  
 WO #:  
 Project #:  
 SOW#:

Analysis Requested  
 8  
 2540C - Total Dissolved Solids  
 8020, 7A10A, APPT III + IV  
 9315, 76226, 9320, Pa228

Matrix (Water, Seawater, or Washwater)  
 Sample Type (C=Comp, G=Grab)  
 Sample Time  
 Sample Date

Sample Identification	Sample Type	Sample Time	Sample Date	Matrix	Preservation Code	Method of Shipment	Special Instructions/Note
FB-2(AP)	G	7/20/16 1140	7/20/16	Water	111	111	3
WGWC-12	G	7/20/16 1505	7/20/16	Water	111	111	3
WGWC-9	G	7/20/16 1452	7/20/16	Water	111	111	3
WGWC-15	G	7/19/16 1615	7/19/16	Water	111	111	3
WGWC-16	G	7/19/16 1610	7/19/16	Water	111	111	3
				Water			
				Water			
				Water			
				Water			
				Water			
				Water			

Possible Hazard Identification  
 Non-Hazard  
 Flammable  
 Skin Irritant  
 Poison B  
 Unknown  
 Ecotoxicological  
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: 7/20/16 1730  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Custody Seal Intact: \_\_\_\_\_  
 A Yes A No  
 Custody Seal No.: \_\_\_\_\_

Special Instructions/IC Requirements:  
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  
 Disposal By Lab  
 Archive For \_\_\_\_\_ Months

Method of Shipment:  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Custody Seal Intact: \_\_\_\_\_  
 A Yes A No  
 Custody Seal No.: \_\_\_\_\_





## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-124709-2

SDG Number: Ash Pond

**Login Number: 124709**

**List Number: 1**

**Creator: Janish, Carl 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.	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	2.5°C, 3.1°C, 2.8°C, 1.2°C, 0.1°C, 0.1°C, 0.0°C, 0.0°C, 0.0°C, 0.7°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	



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-124709-2

SDG Number: Ash Pond

**Login Number: 124709**

**List Number: 2**

**Creator: Hughes, Nicholas T**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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	1.2, 0.1, 0.1, 0.0, 0.0, 0.0 °C - IR6
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 Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

## 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 Wansley

TestAmerica Job ID: 400-124709-2  
SDG: Ash Pond

## 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	MO000542016-8	07-31-17
Virginia	NELAP	3	460230	06-14-17
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-16 *

\* Certification renewal pending - certification considered valid.

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: 400-127118-1

TestAmerica Sample Delivery Group: Wansley AP CCR GW

Client Project/Site: CCR Plant Wansley

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

10/10/2016 2:39:23 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

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

### LINKS

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

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

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# Detection Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

## Client Sample ID: WGWA-1

## Lab Sample ID: 400-127118-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.6		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.029		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	0.44		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0015	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	50		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-2

## Lab Sample ID: 400-127118-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.4		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	1.1		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.021		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	13		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00095	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium - RA	0.0075		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	70		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-3

## Lab Sample ID: 400-127118-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.7		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.81	J	1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	1.3		0.25	0.13	mg/L	5		6020	Total Recoverable
Barium - RA	0.013		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	12		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-7

## Lab Sample ID: 400-127118-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.0		1.0	0.89	mg/L	1		300.0	Total/NA
Calcium	0.93		0.25	0.13	mg/L	5		6020	Total Recoverable
Barium - RA	0.011		0.0025	0.00049	mg/L	5		6020	Total Recoverable

## Client Sample ID: FD-1 (AP)

## Lab Sample ID: 400-127118-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.9		1.0	0.89	mg/L	1		300.0	Total/NA
Calcium	0.40		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0013	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Barium - RA	0.032		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 Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

## Client Sample ID: FD-1 (AP) (Continued)

Lab Sample ID: 400-127118-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	10		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FD-2 (AP)

Lab Sample ID: 400-127118-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.0		1.0	0.89	mg/L	1		300.0	Total/NA
Calcium	0.93		0.25	0.13	mg/L	5		6020	Total Recoverable
Barium - RA	0.010		0.0025	0.00049	mg/L	5		6020	Total Recoverable

## Client Sample ID: FB-1 (AP)

Lab Sample ID: 400-127118-7

No Detections.

## Client Sample ID: WGWA-6

Lab Sample ID: 400-127118-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.11	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	8.5		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	25		0.25	0.13	mg/L	5		6020	Total Recoverable
Barium - RA	0.0060		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium - RA	0.0045	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	100		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-18

Lab Sample ID: 400-127118-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.1		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.15	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	11		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00074	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Calcium	23		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0032		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0014	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Barium - RA	0.021		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	120		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Method Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN

**Protocol References:**

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-127118-1	WGWA-1	Water	09/13/16 10:55	09/14/16 09:30
400-127118-2	WGWA-2	Water	09/13/16 14:15	09/14/16 09:30
400-127118-3	WGWA-3	Water	09/13/16 13:30	09/14/16 09:30
400-127118-4	WGWA-7	Water	09/13/16 13:35	09/14/16 09:30
400-127118-5	FD-1 (AP)	Water	09/13/16 00:00	09/14/16 09:30
400-127118-6	FD-2 (AP)	Water	09/13/16 00:00	09/14/16 09:30
400-127118-7	FB-1 (AP)	Water	09/13/16 13:50	09/14/16 09:30
400-127118-8	WGWA-6	Water	09/13/16 12:02	09/14/16 09:30
400-127118-9	WGWA-18	Water	09/13/16 11:00	09/14/16 09:30

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# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWA-1**

**Lab Sample ID: 400-127118-1**

Date Collected: 09/13/16 10:55

Matrix: Water

Date Received: 09/14/16 09:30

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.6		1.0	0.89	mg/L			10/01/16 03:01	1
Fluoride	<0.082		0.20	0.082	mg/L			10/01/16 03:01	1
Sulfate	<0.70		1.0	0.70	mg/L			10/01/16 03:01	1

**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		09/19/16 13:57	09/21/16 00:27	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/19/16 13:57	09/21/16 00:27	5
Barium	0.029		0.0025	0.00049	mg/L		09/19/16 13:57	09/21/16 00:27	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/19/16 13:57	09/21/16 00:27	5
Calcium	0.44		0.25	0.13	mg/L		09/19/16 13:57	09/21/16 00:27	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/19/16 13:57	09/21/16 00:27	5
Cobalt	0.0015	J	0.0025	0.00040	mg/L		09/19/16 13:57	09/21/16 00:27	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/19/16 13:57	09/21/16 00:27	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/19/16 13:57	09/21/16 00:27	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/19/16 13:57	09/21/16 00:27	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/19/16 13:57	09/21/16 00:27	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/19/16 13:57	09/21/16 15:55	5
Boron	<0.021		0.050	0.021	mg/L		09/19/16 13:57	09/21/16 15:55	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/19/16 13:57	09/21/16 15:55	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		09/15/16 12:02	09/16/16 13:32	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	50		5.0	3.4	mg/L			09/17/16 16:06	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWA-2**

**Lab Sample ID: 400-127118-2**

Date Collected: 09/13/16 14:15

Matrix: Water

Date Received: 09/14/16 09:30

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.4		1.0	0.89	mg/L			10/01/16 04:09	1
Fluoride	<0.082		0.20	0.082	mg/L			10/01/16 04:09	1
Sulfate	1.1		1.0	0.70	mg/L			10/01/16 04:09	1

**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		09/19/16 13:57	09/21/16 00:32	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/19/16 13:57	09/21/16 00:32	5
Barium	0.021		0.0025	0.00049	mg/L		09/19/16 13:57	09/21/16 00:32	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/19/16 13:57	09/21/16 00:32	5
Calcium	13		0.25	0.13	mg/L		09/19/16 13:57	09/21/16 00:32	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/19/16 13:57	09/21/16 00:32	5
Cobalt	0.00095	J	0.0025	0.00040	mg/L		09/19/16 13:57	09/21/16 00:32	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/19/16 13:57	09/21/16 00:32	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/19/16 13:57	09/21/16 00:32	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/19/16 13:57	09/21/16 00:32	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/19/16 13:57	09/21/16 00:32	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/19/16 13:57	09/21/16 16:00	5
Boron	<0.021		0.050	0.021	mg/L		09/19/16 13:57	09/21/16 16:00	5
Lithium	0.0075		0.0050	0.0032	mg/L		09/19/16 13:57	09/21/16 16:00	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		09/15/16 12:02	09/16/16 13:34	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	70		5.0	3.4	mg/L			09/17/16 16:06	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWA-3**

**Lab Sample ID: 400-127118-3**

Date Collected: 09/13/16 13:30

Matrix: Water

Date Received: 09/14/16 09:30

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.7		1.0	0.89	mg/L			10/01/16 04:32	1
Fluoride	<0.082		0.20	0.082	mg/L			10/01/16 04:32	1
Sulfate	0.81	J	1.0	0.70	mg/L			10/01/16 04:32	1

**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		09/19/16 13:57	09/21/16 00:50	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/19/16 13:57	09/21/16 00:50	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/19/16 13:57	09/21/16 00:50	5
Calcium	1.3		0.25	0.13	mg/L		09/19/16 13:57	09/21/16 00:50	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/19/16 13:57	09/21/16 00:50	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/19/16 13:57	09/21/16 00:50	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/19/16 13:57	09/21/16 00:50	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/19/16 13:57	09/21/16 00:50	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/19/16 13:57	09/21/16 00:50	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/19/16 13:57	09/21/16 00:50	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.013		0.0025	0.00049	mg/L		09/19/16 13:57	09/21/16 16:18	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/19/16 13:57	09/21/16 16:18	5
Boron	<0.021		0.050	0.021	mg/L		09/19/16 13:57	09/21/16 16:18	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/19/16 13:57	09/21/16 16:18	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		09/15/16 12:02	09/16/16 13:35	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	12		5.0	3.4	mg/L			09/17/16 16:06	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWA-7**

**Lab Sample ID: 400-127118-4**

Date Collected: 09/13/16 13:35

Matrix: Water

Date Received: 09/14/16 09:30

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>2.0</b>		1.0	0.89	mg/L			10/01/16 04:55	1
Fluoride	<0.082		0.20	0.082	mg/L			10/01/16 04:55	1
Sulfate	<0.70		1.0	0.70	mg/L			10/01/16 04:55	1

**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		09/19/16 13:57	09/21/16 00:54	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/19/16 13:57	09/21/16 00:54	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/19/16 13:57	09/21/16 00:54	5
<b>Calcium</b>	<b>0.93</b>		0.25	0.13	mg/L		09/19/16 13:57	09/21/16 00:54	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/19/16 13:57	09/21/16 00:54	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/19/16 13:57	09/21/16 00:54	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/19/16 13:57	09/21/16 00:54	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/19/16 13:57	09/21/16 00:54	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/19/16 13:57	09/21/16 00:54	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/19/16 13:57	09/21/16 00:54	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.011</b>		0.0025	0.00049	mg/L		09/19/16 13:57	09/21/16 16:22	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/19/16 13:57	09/21/16 16:22	5
Boron	<0.021		0.050	0.021	mg/L		09/19/16 13:57	09/21/16 16:22	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/19/16 13:57	09/21/16 16:22	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		09/15/16 12:02	09/16/16 13:36	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			09/17/16 16:06	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

**Client Sample ID: FD-1 (AP)**

**Lab Sample ID: 400-127118-5**

Date Collected: 09/13/16 00:00

Matrix: Water

Date Received: 09/14/16 09:30

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.9</b>		1.0	0.89	mg/L			10/01/16 05:17	1
Fluoride	<0.082		0.20	0.082	mg/L			10/01/16 05:17	1
Sulfate	<0.70		1.0	0.70	mg/L			10/01/16 05:17	1

**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		09/19/16 13:57	09/21/16 00:59	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/19/16 13:57	09/21/16 00:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/19/16 13:57	09/21/16 00:59	5
<b>Calcium</b>	<b>0.40</b>		0.25	0.13	mg/L		09/19/16 13:57	09/21/16 00:59	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/19/16 13:57	09/21/16 00:59	5
<b>Cobalt</b>	<b>0.0013</b>	<b>J</b>	0.0025	0.00040	mg/L		09/19/16 13:57	09/21/16 00:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/19/16 13:57	09/21/16 00:59	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/19/16 13:57	09/21/16 00:59	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/19/16 13:57	09/21/16 00:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/19/16 13:57	09/21/16 00:59	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.032</b>		0.0025	0.00049	mg/L		09/19/16 13:57	09/21/16 16:27	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/19/16 13:57	09/21/16 16:27	5
Boron	<0.021		0.050	0.021	mg/L		09/19/16 13:57	09/21/16 16:27	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/19/16 13:57	09/21/16 16:27	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		09/15/16 12:02	09/16/16 13:37	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>10</b>		5.0	3.4	mg/L			09/17/16 16:06	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

**Client Sample ID: FD-2 (AP)**

**Lab Sample ID: 400-127118-6**

Date Collected: 09/13/16 00:00

Matrix: Water

Date Received: 09/14/16 09:30

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>2.0</b>		1.0	0.89	mg/L			10/01/16 05:40	1
Fluoride	<0.082		0.20	0.082	mg/L			10/01/16 05:40	1
Sulfate	<0.70		1.0	0.70	mg/L			10/01/16 05:40	1

**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		09/19/16 13:57	09/21/16 01:03	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/19/16 13:57	09/21/16 01:03	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/19/16 13:57	09/21/16 01:03	5
<b>Calcium</b>	<b>0.93</b>		0.25	0.13	mg/L		09/19/16 13:57	09/21/16 01:03	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/19/16 13:57	09/21/16 01:03	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/19/16 13:57	09/21/16 01:03	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/19/16 13:57	09/21/16 01:03	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/19/16 13:57	09/21/16 01:03	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/19/16 13:57	09/21/16 01:03	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/19/16 13:57	09/21/16 01:03	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.010</b>		0.0025	0.00049	mg/L		09/19/16 13:57	09/21/16 16:31	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/19/16 13:57	09/21/16 16:31	5
Boron	<0.021		0.050	0.021	mg/L		09/19/16 13:57	09/21/16 16:31	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/19/16 13:57	09/21/16 16:31	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		09/15/16 12:02	09/16/16 13:47	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			09/17/16 16:06	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

**Client Sample ID: FB-1 (AP)**

**Lab Sample ID: 400-127118-7**

Date Collected: 09/13/16 13:50

Matrix: Water

Date Received: 09/14/16 09:30

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/01/16 06:03	1
Fluoride	<0.082		0.20	0.082	mg/L			10/01/16 06:03	1
Sulfate	<0.70		1.0	0.70	mg/L			10/01/16 06:03	1

**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		09/19/16 13:57	09/21/16 01:08	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/19/16 13:57	09/21/16 01:08	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/19/16 13:57	09/21/16 01:08	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/19/16 13:57	09/21/16 01:08	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/19/16 13:57	09/21/16 01:08	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/19/16 13:57	09/21/16 01:08	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/19/16 13:57	09/21/16 01:08	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/19/16 13:57	09/21/16 01:08	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/19/16 13:57	09/21/16 01:08	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		09/19/16 13:57	09/21/16 16:36	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/19/16 13:57	09/21/16 16:36	5
Boron	<0.021		0.050	0.021	mg/L		09/19/16 13:57	09/21/16 16:36	5
Calcium	<0.13		0.25	0.13	mg/L		09/19/16 13:57	09/21/16 16:36	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/19/16 13:57	09/21/16 16:36	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		09/15/16 12:02	09/16/16 13:48	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			09/17/16 16:06	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-127118-8**

Date Collected: 09/13/16 12:02

Matrix: Water

Date Received: 09/14/16 09:30

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4		1.0	0.89	mg/L			10/01/16 06:49	1
Fluoride	0.11	J	0.20	0.082	mg/L			10/01/16 06:49	1
Sulfate	8.5		1.0	0.70	mg/L			10/01/16 06:49	1

**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		09/19/16 13:57	09/21/16 01:12	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/19/16 13:57	09/21/16 01:12	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/19/16 13:57	09/21/16 01:12	5
Calcium	25		0.25	0.13	mg/L		09/19/16 13:57	09/21/16 01:12	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/19/16 13:57	09/21/16 01:12	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/19/16 13:57	09/21/16 01:12	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/19/16 13:57	09/21/16 01:12	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/19/16 13:57	09/21/16 01:12	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/19/16 13:57	09/21/16 01:12	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/19/16 13:57	09/21/16 01:12	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.0060		0.0025	0.00049	mg/L		09/19/16 13:57	09/21/16 16:40	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/19/16 13:57	09/21/16 16:40	5
Boron	<0.021		0.050	0.021	mg/L		09/19/16 13:57	09/21/16 16:40	5
Lithium	0.0045	J	0.0050	0.0032	mg/L		09/19/16 13:57	09/21/16 16:40	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		09/15/16 12:02	09/16/16 13:50	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	100		5.0	3.4	mg/L			09/17/16 16:06	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWA-18**

**Lab Sample ID: 400-127118-9**

Date Collected: 09/13/16 11:00

Matrix: Water

Date Received: 09/14/16 09:30

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.1		1.0	0.89	mg/L			10/01/16 07:11	1
Fluoride	0.15	J	0.20	0.082	mg/L			10/01/16 07:11	1
Sulfate	11		1.0	0.70	mg/L			10/01/16 07:11	1

**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		09/19/16 13:57	09/21/16 01:17	5
Arsenic	0.00074	J	0.0013	0.00046	mg/L		09/19/16 13:57	09/21/16 01:17	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/19/16 13:57	09/21/16 01:17	5
Calcium	23		0.25	0.13	mg/L		09/19/16 13:57	09/21/16 01:17	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/19/16 13:57	09/21/16 01:17	5
Cobalt	0.0032		0.0025	0.00040	mg/L		09/19/16 13:57	09/21/16 01:17	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/19/16 13:57	09/21/16 01:17	5
Molybdenum	0.0014	J	0.015	0.00085	mg/L		09/19/16 13:57	09/21/16 01:17	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/19/16 13:57	09/21/16 01:17	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/19/16 13:57	09/21/16 01:17	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.021		0.0025	0.00049	mg/L		09/19/16 13:57	09/21/16 16:45	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/19/16 13:57	09/21/16 16:45	5
Boron	<0.021		0.050	0.021	mg/L		09/19/16 13:57	09/21/16 16:45	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/19/16 13:57	09/21/16 16:45	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		09/15/16 12:02	09/16/16 13:51	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	120		5.0	3.4	mg/L			09/17/16 16:06	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

## Qualifiers

### HPLC/IC

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.

### 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.

## 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 Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

## Client Sample ID: WGWA-1

**Lab Sample ID: 400-127118-1**

Date Collected: 09/13/16 10:55

Matrix: Water

Date Received: 09/14/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	325127	10/01/16 03:01	KH1	TAL PEN
Total Recoverable	Prep	3005A			323191	09/19/16 13:57	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	323471	09/21/16 00:27	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		323191	09/19/16 13:57	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	323826	09/21/16 15:55	RJB	TAL PEN
Total/NA	Prep	7470A			322533	09/15/16 12:02	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322956	09/16/16 13:32	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323017	09/17/16 16:06	TET	TAL PEN

## Client Sample ID: WGWA-2

**Lab Sample ID: 400-127118-2**

Date Collected: 09/13/16 14:15

Matrix: Water

Date Received: 09/14/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	325127	10/01/16 04:09	KH1	TAL PEN
Total Recoverable	Prep	3005A			323191	09/19/16 13:57	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	323471	09/21/16 00:32	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		323191	09/19/16 13:57	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	323826	09/21/16 16:00	RJB	TAL PEN
Total/NA	Prep	7470A			322533	09/15/16 12:02	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322956	09/16/16 13:34	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323017	09/17/16 16:06	TET	TAL PEN

## Client Sample ID: WGWA-3

**Lab Sample ID: 400-127118-3**

Date Collected: 09/13/16 13:30

Matrix: Water

Date Received: 09/14/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	325127	10/01/16 04:32	KH1	TAL PEN
Total Recoverable	Prep	3005A			323191	09/19/16 13:57	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	323471	09/21/16 00:50	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		323191	09/19/16 13:57	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	323826	09/21/16 16:18	RJB	TAL PEN
Total/NA	Prep	7470A			322533	09/15/16 12:02	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322956	09/16/16 13:35	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323017	09/17/16 16:06	TET	TAL PEN

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

## Client Sample ID: WGWA-7

## Lab Sample ID: 400-127118-4

Date Collected: 09/13/16 13:35

Matrix: Water

Date Received: 09/14/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	325127	10/01/16 04:55	KH1	TAL PEN
Total Recoverable	Prep	3005A			323191	09/19/16 13:57	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	323471	09/21/16 00:54	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		323191	09/19/16 13:57	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	323826	09/21/16 16:22	RJB	TAL PEN
Total/NA	Prep	7470A			322533	09/15/16 12:02	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322956	09/16/16 13:36	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323017	09/17/16 16:06	TET	TAL PEN

## Client Sample ID: FD-1 (AP)

## Lab Sample ID: 400-127118-5

Date Collected: 09/13/16 00:00

Matrix: Water

Date Received: 09/14/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	325127	10/01/16 05:17	KH1	TAL PEN
Total Recoverable	Prep	3005A			323191	09/19/16 13:57	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	323471	09/21/16 00:59	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		323191	09/19/16 13:57	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	323826	09/21/16 16:27	RJB	TAL PEN
Total/NA	Prep	7470A			322533	09/15/16 12:02	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322956	09/16/16 13:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323017	09/17/16 16:06	TET	TAL PEN

## Client Sample ID: FD-2 (AP)

## Lab Sample ID: 400-127118-6

Date Collected: 09/13/16 00:00

Matrix: Water

Date Received: 09/14/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	325127	10/01/16 05:40	KH1	TAL PEN
Total Recoverable	Prep	3005A			323191	09/19/16 13:57	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	323471	09/21/16 01:03	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		323191	09/19/16 13:57	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	323826	09/21/16 16:31	RJB	TAL PEN
Total/NA	Prep	7470A			322533	09/15/16 12:02	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322956	09/16/16 13:47	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323017	09/17/16 16:06	TET	TAL PEN

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

## Client Sample ID: FB-1 (AP)

Lab Sample ID: 400-127118-7

Date Collected: 09/13/16 13:50

Matrix: Water

Date Received: 09/14/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	325127	10/01/16 06:03	KH1	TAL PEN
Total Recoverable	Prep	3005A			323191	09/19/16 13:57	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	323471	09/21/16 01:08	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		323191	09/19/16 13:57	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	323826	09/21/16 16:36	RJB	TAL PEN
Total/NA	Prep	7470A			322533	09/15/16 12:02	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322956	09/16/16 13:48	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323017	09/17/16 16:06	TET	TAL PEN

## Client Sample ID: WGWA-6

Lab Sample ID: 400-127118-8

Date Collected: 09/13/16 12:02

Matrix: Water

Date Received: 09/14/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	325127	10/01/16 06:49	KH1	TAL PEN
Total Recoverable	Prep	3005A			323191	09/19/16 13:57	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	323471	09/21/16 01:12	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		323191	09/19/16 13:57	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	323826	09/21/16 16:40	RJB	TAL PEN
Total/NA	Prep	7470A			322533	09/15/16 12:02	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322956	09/16/16 13:50	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323017	09/17/16 16:06	TET	TAL PEN

## Client Sample ID: WGWA-18

Lab Sample ID: 400-127118-9

Date Collected: 09/13/16 11:00

Matrix: Water

Date Received: 09/14/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	325127	10/01/16 07:11	KH1	TAL PEN
Total Recoverable	Prep	3005A			323191	09/19/16 13:57	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	323471	09/21/16 01:17	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		323191	09/19/16 13:57	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	323826	09/21/16 16:45	RJB	TAL PEN
Total/NA	Prep	7470A			322533	09/15/16 12:02	JAP	TAL PEN
Total/NA	Analysis	7470A		1	322956	09/16/16 13:51	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323017	09/17/16 16:06	TET	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 Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

## HPLC/IC

### Analysis Batch: 325127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127118-1	WGWA-1	Total/NA	Water	300.0	
400-127118-2	WGWA-2	Total/NA	Water	300.0	
400-127118-3	WGWA-3	Total/NA	Water	300.0	
400-127118-4	WGWA-7	Total/NA	Water	300.0	
400-127118-5	FD-1 (AP)	Total/NA	Water	300.0	
400-127118-6	FD-2 (AP)	Total/NA	Water	300.0	
400-127118-7	FB-1 (AP)	Total/NA	Water	300.0	
400-127118-8	WGWA-6	Total/NA	Water	300.0	
400-127118-9	WGWA-18	Total/NA	Water	300.0	
MB 400-325127/4	Method Blank	Total/NA	Water	300.0	
LCS 400-325127/5	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-325127/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-127118-7 MS	FB-1 (AP)	Total/NA	Water	300.0	
400-127540-Z-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

## Metals

### Prep Batch: 322533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127118-1	WGWA-1	Total/NA	Water	7470A	
400-127118-2	WGWA-2	Total/NA	Water	7470A	
400-127118-3	WGWA-3	Total/NA	Water	7470A	
400-127118-4	WGWA-7	Total/NA	Water	7470A	
400-127118-5	FD-1 (AP)	Total/NA	Water	7470A	
400-127118-6	FD-2 (AP)	Total/NA	Water	7470A	
400-127118-7	FB-1 (AP)	Total/NA	Water	7470A	
400-127118-8	WGWA-6	Total/NA	Water	7470A	
400-127118-9	WGWA-18	Total/NA	Water	7470A	
MB 400-322533/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-322533/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-127088-A-3-B MS	Matrix Spike	Total/NA	Water	7470A	
400-127088-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

### Analysis Batch: 322956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127118-1	WGWA-1	Total/NA	Water	7470A	322533
400-127118-2	WGWA-2	Total/NA	Water	7470A	322533
400-127118-3	WGWA-3	Total/NA	Water	7470A	322533
400-127118-4	WGWA-7	Total/NA	Water	7470A	322533
400-127118-5	FD-1 (AP)	Total/NA	Water	7470A	322533
400-127118-6	FD-2 (AP)	Total/NA	Water	7470A	322533
400-127118-7	FB-1 (AP)	Total/NA	Water	7470A	322533
400-127118-8	WGWA-6	Total/NA	Water	7470A	322533
400-127118-9	WGWA-18	Total/NA	Water	7470A	322533
MB 400-322533/14-A	Method Blank	Total/NA	Water	7470A	322533
LCS 400-322533/15-A	Lab Control Sample	Total/NA	Water	7470A	322533
400-127088-A-3-B MS	Matrix Spike	Total/NA	Water	7470A	322533
400-127088-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	322533

# QC Association Summary

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-1  
 SDG: Wansley AP CCR GW

## Metals (Continued)

### Prep Batch: 323191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127118-1 - RA	WGWA-1	Total Recoverable	Water	3005A	
400-127118-1	WGWA-1	Total Recoverable	Water	3005A	
400-127118-2	WGWA-2	Total Recoverable	Water	3005A	
400-127118-2 - RA	WGWA-2	Total Recoverable	Water	3005A	
400-127118-3 - RA	WGWA-3	Total Recoverable	Water	3005A	
400-127118-3	WGWA-3	Total Recoverable	Water	3005A	
400-127118-4 - RA	WGWA-7	Total Recoverable	Water	3005A	
400-127118-4	WGWA-7	Total Recoverable	Water	3005A	
400-127118-5	FD-1 (AP)	Total Recoverable	Water	3005A	
400-127118-5 - RA	FD-1 (AP)	Total Recoverable	Water	3005A	
400-127118-6 - RA	FD-2 (AP)	Total Recoverable	Water	3005A	
400-127118-6	FD-2 (AP)	Total Recoverable	Water	3005A	
400-127118-7	FB-1 (AP)	Total Recoverable	Water	3005A	
400-127118-7 - RA	FB-1 (AP)	Total Recoverable	Water	3005A	
400-127118-8 - RA	WGWA-6	Total Recoverable	Water	3005A	
400-127118-8	WGWA-6	Total Recoverable	Water	3005A	
400-127118-9	WGWA-18	Total Recoverable	Water	3005A	
400-127118-9 - RA	WGWA-18	Total Recoverable	Water	3005A	
MB 400-323191/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-323191/2-A ^1	Lab Control Sample	Total Recoverable	Water	3005A	
400-127259-B-10-A MS ^5	Matrix Spike	Dissolved	Water	3005A	
400-127259-B-10-B MSD ^5	Matrix Spike Duplicate	Dissolved	Water	3005A	

### Analysis Batch: 323471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127118-1	WGWA-1	Total Recoverable	Water	6020	323191
400-127118-2	WGWA-2	Total Recoverable	Water	6020	323191
400-127118-3	WGWA-3	Total Recoverable	Water	6020	323191
400-127118-4	WGWA-7	Total Recoverable	Water	6020	323191
400-127118-5	FD-1 (AP)	Total Recoverable	Water	6020	323191
400-127118-6	FD-2 (AP)	Total Recoverable	Water	6020	323191
400-127118-7	FB-1 (AP)	Total Recoverable	Water	6020	323191
400-127118-8	WGWA-6	Total Recoverable	Water	6020	323191
400-127118-9	WGWA-18	Total Recoverable	Water	6020	323191
MB 400-323191/1-A ^5	Method Blank	Total Recoverable	Water	6020	323191
LCS 400-323191/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	323191
400-127259-B-10-A MS ^5	Matrix Spike	Dissolved	Water	6020	323191
400-127259-B-10-B MSD ^5	Matrix Spike Duplicate	Dissolved	Water	6020	323191

### Analysis Batch: 323826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127118-1 - RA	WGWA-1	Total Recoverable	Water	6020	323191
400-127118-2 - RA	WGWA-2	Total Recoverable	Water	6020	323191
400-127118-3 - RA	WGWA-3	Total Recoverable	Water	6020	323191
400-127118-4 - RA	WGWA-7	Total Recoverable	Water	6020	323191
400-127118-5 - RA	FD-1 (AP)	Total Recoverable	Water	6020	323191
400-127118-6 - RA	FD-2 (AP)	Total Recoverable	Water	6020	323191
400-127118-7 - RA	FB-1 (AP)	Total Recoverable	Water	6020	323191
400-127118-8 - RA	WGWA-6	Total Recoverable	Water	6020	323191
400-127118-9 - RA	WGWA-18	Total Recoverable	Water	6020	323191
MB 400-323191/1-A ^5	Method Blank	Total Recoverable	Water	6020	323191

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-1  
 SDG: Wansley AP CCR GW

## Metals (Continued)

### Analysis Batch: 323826 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-323191/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	323191

## General Chemistry

### Analysis Batch: 323017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127118-1	WGWA-1	Total/NA	Water	SM 2540C	
400-127118-2	WGWA-2	Total/NA	Water	SM 2540C	
400-127118-3	WGWA-3	Total/NA	Water	SM 2540C	
400-127118-4	WGWA-7	Total/NA	Water	SM 2540C	
400-127118-5	FD-1 (AP)	Total/NA	Water	SM 2540C	
400-127118-6	FD-2 (AP)	Total/NA	Water	SM 2540C	
400-127118-7	FB-1 (AP)	Total/NA	Water	SM 2540C	
400-127118-8	WGWA-6	Total/NA	Water	SM 2540C	
400-127118-9	WGWA-18	Total/NA	Water	SM 2540C	
MB 400-323017/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-323017/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-127118-3 DU	WGWA-3	Total/NA	Water	SM 2540C	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 400-325127/4**  
**Matrix: Water**  
**Analysis Batch: 325127**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			09/30/16 23:35	1
Fluoride	<0.082		0.20	0.082	mg/L			09/30/16 23:35	1
Sulfate	<0.70		1.0	0.70	mg/L			09/30/16 23:35	1

**Lab Sample ID: LCS 400-325127/5**  
**Matrix: Water**  
**Analysis Batch: 325127**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.78		mg/L		98	90 - 110
Fluoride	10.0	10.2		mg/L		102	90 - 110
Sulfate	10.0	10.1		mg/L		101	90 - 110

**Lab Sample ID: LCSD 400-325127/6**  
**Matrix: Water**  
**Analysis Batch: 325127**

**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	10.0	9.81		mg/L		98	90 - 110	0	15
Fluoride	10.0	10.2		mg/L		102	90 - 110	0	15
Sulfate	10.0	10.1		mg/L		101	90 - 110	1	15

**Lab Sample ID: 400-127118-7 MS**  
**Matrix: Water**  
**Analysis Batch: 325127**

**Client Sample ID: FB-1 (AP)**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	<0.89		10.0	10.7		mg/L		107	80 - 120
Fluoride	<0.082		10.0	11.3		mg/L		113	80 - 120
Sulfate	<0.70		10.0	11.2		mg/L		112	80 - 120

**Lab Sample ID: 400-127540-Z-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 325127**

**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	34		250	281		mg/L		99	80 - 120	0	20
Fluoride	<2.1		250	261		mg/L		104	80 - 120	0	20
Sulfate	470		250	723		mg/L		101	80 - 120	0	20

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

**Lab Sample ID: MB 400-323191/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 323471**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 323191**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/19/16 13:57	09/20/16 23:06	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/19/16 13:57	09/20/16 23:06	5

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

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

Lab Sample ID: MB 400-323191/1-A ^5  
Matrix: Water  
Analysis Batch: 323471

Client Sample ID: Method Blank  
Prep Type: Total Recoverable  
Prep Batch: 323191

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		09/19/16 13:57	09/20/16 23:06	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/19/16 13:57	09/20/16 23:06	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/19/16 13:57	09/20/16 23:06	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/19/16 13:57	09/20/16 23:06	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/19/16 13:57	09/20/16 23:06	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/19/16 13:57	09/20/16 23:06	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/19/16 13:57	09/20/16 23:06	5
Thallium	<0.00085		0.00050	0.00085	mg/L		09/19/16 13:57	09/20/16 23:06	5

Lab Sample ID: MB 400-323191/1-A ^5  
Matrix: Water  
Analysis Batch: 323826

Client Sample ID: Method Blank  
Prep Type: Total Recoverable  
Prep Batch: 323191

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		09/19/16 13:57	09/21/16 15:28	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/19/16 13:57	09/21/16 15:28	5
Boron	<0.021		0.050	0.021	mg/L		09/19/16 13:57	09/21/16 15:28	5
Calcium	<0.13		0.25	0.13	mg/L		09/19/16 13:57	09/21/16 15:28	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/19/16 13:57	09/21/16 15:28	5

Lab Sample ID: LCS 400-323191/2-A ^1  
Matrix: Water  
Analysis Batch: 323471

Client Sample ID: Lab Control Sample  
Prep Type: Total Recoverable  
Prep Batch: 323191

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	0.0498		mg/L		100	80 - 120
Barium	0.0500	0.0451		mg/L		90	80 - 120
Cadmium	0.0500	0.0470		mg/L		94	80 - 120
Calcium	5.00	4.83		mg/L		97	80 - 120
Chromium	0.0500	0.0481		mg/L		96	80 - 120
Cobalt	0.0500	0.0480		mg/L		96	80 - 120
Lead	0.0500	0.0465		mg/L		93	80 - 120
Molybdenum	0.0500	0.0487		mg/L		97	80 - 120
Selenium	0.0500	0.0488		mg/L		98	80 - 120
Thallium	0.0100	0.00943		mg/L		94	80 - 120

Lab Sample ID: LCS 400-323191/2-A ^1  
Matrix: Water  
Analysis Batch: 323826

Client Sample ID: Lab Control Sample  
Prep Type: Total Recoverable  
Prep Batch: 323191

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	0.0500	0.0472		mg/L		94	80 - 120
Beryllium	0.0500	0.0495		mg/L		99	80 - 120
Boron	0.100	0.0935		mg/L		93	80 - 120
Calcium	5.00	4.75		mg/L		95	80 - 120
Lithium	0.0500	0.0508		mg/L		102	80 - 120

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

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

**Lab Sample ID: 400-127259-B-10-A MS ^5**  
**Matrix: Water**  
**Analysis Batch: 323471**

**Client Sample ID: Matrix Spike**  
**Prep Type: Dissolved**  
**Prep Batch: 323191**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Antimony	<0.0010		0.0500	0.0584		mg/L		117	75 - 125
Arsenic	0.020		0.0500	0.0731		mg/L		106	75 - 125
Barium	0.039		0.0500	0.0876		mg/L		97	75 - 125
Cadmium	<0.00034		0.0500	0.0476		mg/L		95	75 - 125
Calcium	56		5.00	62.3	4	mg/L		117	75 - 125
Chromium	0.032		0.0500	0.0807		mg/L		98	75 - 125
Cobalt	0.0024	J	0.0500	0.0522		mg/L		100	75 - 125
Lead	0.0013		0.0500	0.0480		mg/L		93	75 - 125
Molybdenum	0.037		0.0500	0.0879		mg/L		101	75 - 125
Selenium	0.0017		0.0500	0.0517		mg/L		100	75 - 125
Thallium	<0.000085		0.0100	0.00976		mg/L		98	75 - 125

**Lab Sample ID: 400-127259-B-10-B MSD ^5**  
**Matrix: Water**  
**Analysis Batch: 323471**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Dissolved**  
**Prep Batch: 323191**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	
	Result	Qualifier	Added	Result	Qualifier					RPD	Limit
Antimony	<0.0010		0.0500	0.0550		mg/L		110	75 - 125	6	20
Arsenic	0.020		0.0500	0.0721		mg/L		104	75 - 125	1	20
Barium	0.039		0.0500	0.0859		mg/L		93	75 - 125	2	20
Cadmium	<0.00034		0.0500	0.0465		mg/L		93	75 - 125	2	20
Calcium	56		5.00	62.4	4	mg/L		118	75 - 125	0	20
Chromium	0.032		0.0500	0.0799		mg/L		96	75 - 125	1	20
Cobalt	0.0024	J	0.0500	0.0519		mg/L		99	75 - 125	1	20
Lead	0.0013		0.0500	0.0474		mg/L		92	75 - 125	1	20
Molybdenum	0.037		0.0500	0.0864		mg/L		98	75 - 125	2	20
Selenium	0.0017		0.0500	0.0507		mg/L		98	75 - 125	2	20
Thallium	<0.000085		0.0100	0.00957		mg/L		96	75 - 125	2	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 400-322533/14-A**  
**Matrix: Water**  
**Analysis Batch: 322956**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 322533**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000070		0.00020	0.000070	mg/L		09/14/16 10:28	09/16/16 12:50	1

**Lab Sample ID: LCS 400-322533/15-A**  
**Matrix: Water**  
**Analysis Batch: 322956**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 322533**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-1  
SDG: Wansley AP CCR GW

## Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 400-127088-A-3-B MS  
Matrix: Water  
Analysis Batch: 322956

Client Sample ID: Matrix Spike  
Prep Type: Total/NA  
Prep Batch: 322533

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00191		mg/L		95	80 - 120

Lab Sample ID: 400-127088-A-3-C MSD  
Matrix: Water  
Analysis Batch: 322956

Client Sample ID: Matrix Spike Duplicate  
Prep Type: Total/NA  
Prep Batch: 322533

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00182		mg/L		90	80 - 120	5	20

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

Lab Sample ID: MB 400-323017/1  
Matrix: Water  
Analysis Batch: 323017

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 16:06	1

Lab Sample ID: LCS 400-323017/2  
Matrix: Water  
Analysis Batch: 323017

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	293	282		mg/L		96	78 - 122

Lab Sample ID: 400-127118-3 DU  
Matrix: Water  
Analysis Batch: 323017

Client Sample ID: WGWA-3  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	12		12.0		mg/L		0	5





## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-127118-1

SDG Number: Wansley AP CCR GW

**Login Number: 127118**

**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	CS 660906, 660912
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	2.1°C, 3.0°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 <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 Wansley

TestAmerica Job ID: 400-127118-1  
 SDG: Wansley AP CCR GW

## 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	10-31-16
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-16
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-16 *
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

\* 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: 400-127118-2

TestAmerica Sample Delivery Group: Wansley AP CCR GW

Client Project/Site: CCR Plant Wansley

For:

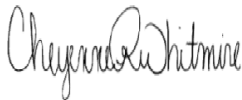
Southern Company

241 Ralph McGill Blvd SE

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Attn: Joju Abraham



Authorized for release by:

10/19/2016 2:31:37 PM

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### LINKS

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

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

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# Case Narrative

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-2  
SDG: Wansley AP CCR GW

**Job ID: 400-127118-2**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-127118-2

#### RAD

Method(s) PrecSep\_0: Radium228 preparation batch 160-270394. Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples WGWA-1 (400-127118-1), WGWA-2 (400-127118-2), WGWA-3 (400-127118-3), WGWA-7 (400-127118-4), FD-1 (AP) (400-127118-5), FD-2 (AP) (400-127118-6), FB-1 (AP) (400-127118-7), WGWA-6 (400-127118-8) and WGWA-18 (400-127118-9). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method(s) PrecSep-21: Radium226 preparation batch 160-270393 and 160-270393. Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples WGWA-1 (400-127118-1), WGWA-2 (400-127118-2), WGWA-3 (400-127118-3), WGWA-7 (400-127118-4), FD-1 (AP) (400-127118-5), FD-2 (AP) (400-127118-6), FB-1 (AP) (400-127118-7), WGWA-6 (400-127118-8) and WGWA-18 (400-127118-9). 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 Wansley

TestAmerica Job ID: 400-127118-2  
SDG: Wansley AP CCR GW

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 Wansley

TestAmerica Job ID: 400-127118-2  
SDG: Wansley AP CCR GW

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-127118-1	WGWA-1	Water	09/13/16 10:55	09/14/16 09:30
400-127118-2	WGWA-2	Water	09/13/16 14:15	09/14/16 09:30
400-127118-3	WGWA-3	Water	09/13/16 13:30	09/14/16 09:30
400-127118-4	WGWA-7	Water	09/13/16 13:35	09/14/16 09:30
400-127118-5	FD-1 (AP)	Water	09/13/16 00:00	09/14/16 09:30
400-127118-6	FD-2 (AP)	Water	09/13/16 00:00	09/14/16 09:30
400-127118-7	FB-1 (AP)	Water	09/13/16 13:50	09/14/16 09:30
400-127118-8	WGWA-6	Water	09/13/16 12:02	09/14/16 09:30
400-127118-9	WGWA-18	Water	09/13/16 11:00	09/14/16 09:30

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-2  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWA-1**

**Lab Sample ID: 400-127118-1**

**Date Collected: 09/13/16 10:55**

**Matrix: Water**

**Date Received: 09/14/16 09:30**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.147		0.0723	0.0736	1.00	0.0917	pCi/L	09/17/16 12:10	10/11/16 14:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.3		40 - 110					09/17/16 12:10	10/11/16 14:51	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.444	U	0.376	0.378	1.00	0.601	pCi/L	09/17/16 12:41	10/05/16 19:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.3		40 - 110					09/17/16 12:41	10/05/16 19:00	1
Y Carrier	76.6		40 - 110					09/17/16 12:41	10/05/16 19:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.592	U	0.383	0.385	5.00	0.601	pCi/L		10/13/16 10:08	1



# Client Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-2  
 SDG: Wansley AP CCR GW

**Client Sample ID: WGWA-2**

**Lab Sample ID: 400-127118-2**

**Date Collected: 09/13/16 14:15**

**Matrix: Water**

**Date Received: 09/14/16 09:30**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.190		0.0857	0.0874	1.00	0.109	pCi/L	09/17/16 12:10	10/11/16 14:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.8		40 - 110					09/17/16 12:10	10/11/16 14:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.182	U	0.373	0.374	1.00	0.638	pCi/L	09/17/16 12:41	10/05/16 19:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.8		40 - 110					09/17/16 12:41	10/05/16 19:00	1
Y Carrier	72.1		40 - 110					09/17/16 12:41	10/05/16 19:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.372	U	0.383	0.384	5.00	0.638	pCi/L		10/13/16 10:08	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-2  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWA-3**

**Lab Sample ID: 400-127118-3**

**Date Collected: 09/13/16 13:30**

**Matrix: Water**

**Date Received: 09/14/16 09:30**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0782	U	0.0562	0.0566	1.00	0.0796	pCi/L	09/17/16 12:10	10/11/16 14:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.1		40 - 110					09/17/16 12:10	10/11/16 14:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.137	U	0.327	0.327	1.00	0.564	pCi/L	09/17/16 12:41	10/05/16 19:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.1		40 - 110					09/17/16 12:41	10/05/16 19:00	1
Y Carrier	74.0		40 - 110					09/17/16 12:41	10/05/16 19:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.215	U	0.332	0.332	5.00	0.564	pCi/L		10/13/16 10:08	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-2  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWA-7**

**Lab Sample ID: 400-127118-4**

**Date Collected: 09/13/16 13:35**

**Matrix: Water**

**Date Received: 09/14/16 09:30**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0761	U	0.0593	0.0597	1.00	0.0883	pCi/L	09/17/16 12:10	10/11/16 14:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.6		40 - 110					09/17/16 12:10	10/11/16 14:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.451	U	0.360	0.363	1.00	0.569	pCi/L	09/17/16 12:41	10/05/16 19:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.6		40 - 110					09/17/16 12:41	10/05/16 19:00	1
Y Carrier	73.3		40 - 110					09/17/16 12:41	10/05/16 19:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.527	U	0.365	0.367	5.00	0.569	pCi/L		10/13/16 10:08	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-2  
SDG: Wansley AP CCR GW

**Client Sample ID: FD-1 (AP)**

**Lab Sample ID: 400-127118-5**

**Date Collected: 09/13/16 00:00**

**Matrix: Water**

**Date Received: 09/14/16 09:30**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0631	U	0.0663	0.0666	1.00	0.107	pCi/L	09/17/16 12:10	10/11/16 14:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.9		40 - 110					09/17/16 12:10	10/11/16 14:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.389	U	0.353	0.355	1.00	0.568	pCi/L	09/17/16 12:41	10/05/16 19:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.9		40 - 110					09/17/16 12:41	10/05/16 19:00	1
Y Carrier	79.3		40 - 110					09/17/16 12:41	10/05/16 19:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.452	U	0.359	0.361	5.00	0.568	pCi/L		10/13/16 10:08	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-2  
SDG: Wansley AP CCR GW

**Client Sample ID: FD-2 (AP)**

**Lab Sample ID: 400-127118-6**

Date Collected: 09/13/16 00:00

Matrix: Water

Date Received: 09/14/16 09:30

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0890		0.0570	0.0575	1.00	0.0780	pCi/L	09/17/16 12:10	10/11/16 14:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.3		40 - 110					09/17/16 12:10	10/11/16 14:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.114	U	0.323	0.323	1.00	0.559	pCi/L	09/17/16 12:41	10/05/16 19:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.3		40 - 110					09/17/16 12:41	10/05/16 19:00	1
Y Carrier	75.5		40 - 110					09/17/16 12:41	10/05/16 19:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.203	U	0.328	0.328	5.00	0.559	pCi/L		10/13/16 10:08	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-2  
SDG: Wansley AP CCR GW

**Client Sample ID: FB-1 (AP)**

**Lab Sample ID: 400-127118-7**

**Date Collected: 09/13/16 13:50**

**Matrix: Water**

**Date Received: 09/14/16 09:30**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0431	U	0.0568	0.0570	1.00	0.0951	pCi/L	09/17/16 12:10	10/11/16 14:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.2		40 - 110					09/17/16 12:10	10/11/16 14:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0356	U	0.310	0.310	1.00	0.552	pCi/L	09/17/16 12:41	10/05/16 19:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.2		40 - 110					09/17/16 12:41	10/05/16 19:00	1
Y Carrier	77.0		40 - 110					09/17/16 12:41	10/05/16 19:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0786	U	0.315	0.315	5.00	0.552	pCi/L		10/13/16 10:08	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-2  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-127118-8**

**Date Collected: 09/13/16 12:02**

**Matrix: Water**

**Date Received: 09/14/16 09:30**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.155		0.0701	0.0715	1.00	0.0835	pCi/L	09/17/16 12:10	10/11/16 14:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.2		40 - 110					09/17/16 12:10	10/11/16 14:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	6.83		0.763	0.988	1.00	0.621	pCi/L	09/17/16 12:41	10/05/16 19:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.2		40 - 110					09/17/16 12:41	10/05/16 19:00	1
Y Carrier	72.9		40 - 110					09/17/16 12:41	10/05/16 19:00	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.98		0.766	0.990	5.00	0.621	pCi/L		10/13/16 10:08	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-2  
 SDG: Wansley AP CCR GW

**Client Sample ID: WGWA-18**

**Lab Sample ID: 400-127118-9**

**Date Collected: 09/13/16 11:00**

**Matrix: Water**

**Date Received: 09/14/16 09:30**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.200		0.0757	0.0779	1.00	0.0813	pCi/L	09/17/16 12:13	10/11/16 14:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.5		40 - 110					09/17/16 12:13	10/11/16 14:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.00605	U	0.316	0.316	1.00	0.567	pCi/L	09/17/16 12:41	10/05/16 18:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.5		40 - 110					09/17/16 12:41	10/05/16 18:53	1
Y Carrier	79.6		40 - 110					09/17/16 12:41	10/05/16 18:53	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	0.194	U	0.325	0.326	5.00	0.567	pCi/L		10/13/16 10:08	1



# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-2  
SDG: Wansley AP CCR GW

## 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 Wansley

TestAmerica Job ID: 400-127118-2  
SDG: Wansley AP CCR GW

## Client Sample ID: WGWA-1

Date Collected: 09/13/16 10:55

Date Received: 09/14/16 09:30

## Lab Sample ID: 400-127118-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			270393	09/17/16 12:10	MCJ	TAL SL
Total/NA	Analysis	9315		1	274023	10/11/16 14:51	RTM	TAL SL
Total/NA	Prep	PrecSep_0			270394	09/17/16 12:41	MCJ	TAL SL
Total/NA	Analysis	9320		1	273252	10/05/16 19:00	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274363	10/13/16 10:08	RTM	TAL SL

## Client Sample ID: WGWA-2

Date Collected: 09/13/16 14:15

Date Received: 09/14/16 09:30

## Lab Sample ID: 400-127118-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			270393	09/17/16 12:10	MCJ	TAL SL
Total/NA	Analysis	9315		1	274023	10/11/16 14:52	RTM	TAL SL
Total/NA	Prep	PrecSep_0			270394	09/17/16 12:41	MCJ	TAL SL
Total/NA	Analysis	9320		1	273252	10/05/16 19:00	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274363	10/13/16 10:08	RTM	TAL SL

## Client Sample ID: WGWA-3

Date Collected: 09/13/16 13:30

Date Received: 09/14/16 09:30

## Lab Sample ID: 400-127118-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			270393	09/17/16 12:10	MCJ	TAL SL
Total/NA	Analysis	9315		1	274023	10/11/16 14:52	RTM	TAL SL
Total/NA	Prep	PrecSep_0			270394	09/17/16 12:41	MCJ	TAL SL
Total/NA	Analysis	9320		1	273252	10/05/16 19:00	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274363	10/13/16 10:08	RTM	TAL SL

## Client Sample ID: WGWA-7

Date Collected: 09/13/16 13:35

Date Received: 09/14/16 09:30

## Lab Sample ID: 400-127118-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			270393	09/17/16 12:10	MCJ	TAL SL
Total/NA	Analysis	9315		1	274023	10/11/16 14:52	RTM	TAL SL
Total/NA	Prep	PrecSep_0			270394	09/17/16 12:41	MCJ	TAL SL
Total/NA	Analysis	9320		1	273252	10/05/16 19:00	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274363	10/13/16 10:08	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-2  
SDG: Wansley AP CCR GW

**Client Sample ID: FD-1 (AP)**

**Lab Sample ID: 400-127118-5**

**Date Collected: 09/13/16 00:00**

**Matrix: Water**

**Date Received: 09/14/16 09:30**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			270393	09/17/16 12:10	MCJ	TAL SL
Total/NA	Analysis	9315		1	274023	10/11/16 14:52	RTM	TAL SL
Total/NA	Prep	PrecSep_0			270394	09/17/16 12:41	MCJ	TAL SL
Total/NA	Analysis	9320		1	273252	10/05/16 19:00	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274363	10/13/16 10:08	RTM	TAL SL

**Client Sample ID: FD-2 (AP)**

**Lab Sample ID: 400-127118-6**

**Date Collected: 09/13/16 00:00**

**Matrix: Water**

**Date Received: 09/14/16 09:30**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			270393	09/17/16 12:10	MCJ	TAL SL
Total/NA	Analysis	9315		1	274023	10/11/16 14:52	RTM	TAL SL
Total/NA	Prep	PrecSep_0			270394	09/17/16 12:41	MCJ	TAL SL
Total/NA	Analysis	9320		1	273252	10/05/16 19:00	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274363	10/13/16 10:08	RTM	TAL SL

**Client Sample ID: FB-1 (AP)**

**Lab Sample ID: 400-127118-7**

**Date Collected: 09/13/16 13:50**

**Matrix: Water**

**Date Received: 09/14/16 09:30**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			270393	09/17/16 12:10	MCJ	TAL SL
Total/NA	Analysis	9315		1	274023	10/11/16 14:52	RTM	TAL SL
Total/NA	Prep	PrecSep_0			270394	09/17/16 12:41	MCJ	TAL SL
Total/NA	Analysis	9320		1	273252	10/05/16 19:00	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274363	10/13/16 10:08	RTM	TAL SL

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-127118-8**

**Date Collected: 09/13/16 12:02**

**Matrix: Water**

**Date Received: 09/14/16 09:30**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			270393	09/17/16 12:10	MCJ	TAL SL
Total/NA	Analysis	9315		1	274023	10/11/16 14:52	RTM	TAL SL
Total/NA	Prep	PrecSep_0			270394	09/17/16 12:41	MCJ	TAL SL
Total/NA	Analysis	9320		1	273252	10/05/16 19:00	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274363	10/13/16 10:08	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-2  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWA-18**

**Lab Sample ID: 400-127118-9**

**Date Collected: 09/13/16 11:00**

**Matrix: Water**

**Date Received: 09/14/16 09:30**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			270393	09/17/16 12:13	MCJ	TAL SL
Total/NA	Analysis	9315		1	274023	10/11/16 14:52	RTM	TAL SL
Total/NA	Prep	PrecSep_0			270394	09/17/16 12:41	MCJ	TAL SL
Total/NA	Analysis	9320		1	273263	10/05/16 18:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274363	10/13/16 10:08	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 Wansley

TestAmerica Job ID: 400-127118-2  
SDG: Wansley AP CCR GW

## Rad

### Prep Batch: 270393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127118-1	WGWA-1	Total/NA	Water	PrecSep-21	
400-127118-2	WGWA-2	Total/NA	Water	PrecSep-21	
400-127118-3	WGWA-3	Total/NA	Water	PrecSep-21	
400-127118-4	WGWA-7	Total/NA	Water	PrecSep-21	
400-127118-5	FD-1 (AP)	Total/NA	Water	PrecSep-21	
400-127118-6	FD-2 (AP)	Total/NA	Water	PrecSep-21	
400-127118-7	FB-1 (AP)	Total/NA	Water	PrecSep-21	
400-127118-8	WGWA-6	Total/NA	Water	PrecSep-21	
400-127118-9	WGWA-18	Total/NA	Water	PrecSep-21	
MB 160-270393/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-270393/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-270393/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 270394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127118-1	WGWA-1	Total/NA	Water	PrecSep_0	
400-127118-2	WGWA-2	Total/NA	Water	PrecSep_0	
400-127118-3	WGWA-3	Total/NA	Water	PrecSep_0	
400-127118-4	WGWA-7	Total/NA	Water	PrecSep_0	
400-127118-5	FD-1 (AP)	Total/NA	Water	PrecSep_0	
400-127118-6	FD-2 (AP)	Total/NA	Water	PrecSep_0	
400-127118-7	FB-1 (AP)	Total/NA	Water	PrecSep_0	
400-127118-8	WGWA-6	Total/NA	Water	PrecSep_0	
400-127118-9	WGWA-18	Total/NA	Water	PrecSep_0	
MB 160-270394/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-270394/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-270394/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-2  
SDG: Wansley AP CCR GW

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

**Lab Sample ID: MB 160-270393/1-A**  
**Matrix: Water**  
**Analysis Batch: 274017**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 270393**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.07308	U	0.0626	0.0629	1.00	0.0953	pCi/L	09/17/16 12:10	10/11/16 15:00	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.5		40 - 110					09/17/16 12:10	10/11/16 15:00	1

**Lab Sample ID: LCS 160-270393/2-A**  
**Matrix: Water**  
**Analysis Batch: 274017**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 270393**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.1	12.97		1.29	1.00	0.125	pCi/L	117	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	73.5		40 - 110						

**Lab Sample ID: LCSD 160-270393/3-A**  
**Matrix: Water**  
**Analysis Batch: 274017**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 270393**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.1	14.29		1.40	1.00	0.0900	pCi/L	129	68 - 137	0.49	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	80.9		40 - 110								

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

**Lab Sample ID: MB 160-270394/1-A**  
**Matrix: Water**  
**Analysis Batch: 273252**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 270394**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1963	U	0.349	0.349	1.00	0.592	pCi/L	09/17/16 12:41	10/05/16 18:56	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.5		40 - 110					09/17/16 12:41	10/05/16 18:56	1
Y Carrier	77.4		40 - 110					09/17/16 12:41	10/05/16 18:56	1

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-2  
 SDG: Wansley AP CCR GW

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

**Lab Sample ID: LCS 160-270394/2-A**  
**Matrix: Water**  
**Analysis Batch: 273252**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 270394**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.5	17.67		2.01	1.00	0.589	pCi/L	122	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	73.5		40 - 110
Y Carrier	74.0		40 - 110

**Lab Sample ID: LCSD 160-270394/3-A**  
**Matrix: Water**  
**Analysis Batch: 273252**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 270394**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	14.5	17.77		1.98	1.00	0.514	pCi/L	123	56 - 140	0.02	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	80.9		40 - 110
Y Carrier	74.4		40 - 110





## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-127118-2  
SDG Number: Wansley AP CCR GW

**Login Number: 127118**

**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	CS 660906, 660912
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	2.1°C, 3.0°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 <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 Wansley

TestAmerica Job ID: 400-127118-2  
SDG: Wansley AP CCR GW

## 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.

TestAmerica Pensacola

# Certification Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127118-2  
SDG: Wansley AP CCR GW

## 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: 400-127231-1

TestAmerica Sample Delivery Group: Wansley AP CCR GW

Client Project/Site: CCR Plant Wansley

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

10/19/2016 4:08:51 PM

Cheyenne Whitmire, Project Manager II

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### LINKS

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

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

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# Case Narrative

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Job ID: 400-127231-1**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-127231-1

#### HPLC/IC

Method(s) 300.0: The method blank for analytical batch 325845 contained Sulfate 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) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: WGWC-15 (400-127231-3), WGWC-16 (400-127231-4) and WGWC-8 (400-127231-15). Elevated reporting limits (RLs) are provided.

#### Metals

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 324311 and analytical batch 325417 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 following sample was diluted to bring the concentration of target analytes within the calibration range: WGWC-16 (400-127231-4). Elevated reporting limits (RLs) are provided.



# Detection Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

## Client Sample ID: EB-1 (AP)

## Lab Sample ID: 400-127231-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Selenium	0.00033	J	0.0013	0.00024	mg/L	5		6020	Total
Total Dissolved Solids	6.0		5.0	3.4	mg/L	1		SM 2540C	Recoverable Total/NA

## Client Sample ID: WGWA-5

## Lab Sample ID: 400-127231-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.1		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.095	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	3.4		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00069	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.062		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	52		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0031		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.013		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.016		0.015	0.00085	mg/L	5		6020	Total Recoverable
Thallium	0.000090	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	150		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-15

## Lab Sample ID: 400-127231-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.9		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.89		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	79		5.0	3.5	mg/L	5		300.0	Total/NA
Arsenic	0.0024		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.020		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	37		0.25	0.13	mg/L	5		6020	Total Recoverable
Molybdenum	0.012	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	230		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-16

## Lab Sample ID: 400-127231-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	260		20	18	mg/L	20		300.0	Total/NA
Fluoride	0.18	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	500		20	14	mg/L	20		300.0	Total/NA
Arsenic	0.0014		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.066		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00037	J	0.0025	0.00034	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 Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

## Client Sample ID: WGWC-16 (Continued)

## Lab Sample ID: 400-127231-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.013		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.012		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.0091		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00017	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	5.8		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	230		5.0	2.5	mg/L	100		6020	Total Recoverable
Total Dissolved Solids	1300		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-11

## Lab Sample ID: 400-127231-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.1		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	1.5	B	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.031		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	24		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-17

## Lab Sample ID: 400-127231-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.6		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.19	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	6.6	B	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.017		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	12		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0014	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0058		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0081	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	82		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-13

## Lab Sample ID: 400-127231-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.6		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.31		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	8.6	B	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.040		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	7.4		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 Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

## Client Sample ID: WGWC-13 (Continued)

## Lab Sample ID: 400-127231-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00055	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Molybdenum	0.0028	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

## Client Sample ID: WGWC-14

## Lab Sample ID: 400-127231-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.1		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	4.3	B	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.15		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	5.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Boron - RA	0.041	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	32		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-9

## Lab Sample ID: 400-127231-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	1.8		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	39	B	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.00092	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	8.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.039		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0071	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0024		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - RA	0.30		0.050	0.021	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	140		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FB-2 (AP)

## Lab Sample ID: 400-127231-10

No Detections.

## Client Sample ID: EB-2 (AP)

## Lab Sample ID: 400-127231-11

No Detections.

## Client Sample ID: WGWA-4

## Lab Sample ID: 400-127231-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.15	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	5.6	B	1.0	0.70	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

## Client Sample ID: WGWA-4 (Continued)

## Lab Sample ID: 400-127231-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0058		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	16		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0042	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	28		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-12

## Lab Sample ID: 400-127231-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.7		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.095	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	16	B	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.020		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	16		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00098	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0077		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.00090	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	96		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-10

## Lab Sample ID: 400-127231-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.5		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.17	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	2.8	B	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.035		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	7.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00095	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.020		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.00091	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

## Client Sample ID: WGWC-8

## Lab Sample ID: 400-127231-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	19		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.24		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	140		5.0	3.5	mg/L	5		300.0	Total/NA
Barium	0.0039		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.2		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 Wansley

TestAmerica Job ID: 400-127231-1  
 SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-8 (Continued)**

**Lab Sample ID: 400-127231-15**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	27		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.057		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.0034		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Beryllium - RA	0.00093	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Mercury	0.00011	J	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	270		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.



# Method Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN

### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-127231-1	EB-1 (AP)	Water	09/14/16 08:50	09/15/16 09:22
400-127231-2	WGWA-5	Water	09/14/16 08:39	09/15/16 09:22
400-127231-3	WGWC-15	Water	09/14/16 10:27	09/15/16 09:22
400-127231-4	WGWC-16	Water	09/14/16 10:30	09/15/16 09:22
400-127231-5	WGWC-11	Water	09/14/16 10:30	09/15/16 09:22
400-127231-6	WGWC-17	Water	09/14/16 10:58	09/15/16 09:22
400-127231-7	WGWC-13	Water	09/14/16 12:35	09/15/16 09:22
400-127231-8	WGWC-14	Water	09/14/16 12:50	09/15/16 09:22
400-127231-9	WGWC-9	Water	09/14/16 12:47	09/15/16 09:22
400-127231-10	FB-2 (AP)	Water	09/14/16 13:00	09/15/16 09:22
400-127231-11	EB-2 (AP)	Water	09/14/16 13:15	09/15/16 09:22
400-127231-12	WGWA-4	Water	09/13/16 15:17	09/15/16 09:22
400-127231-13	WGWC-12	Water	09/14/16 12:50	09/15/16 09:22
400-127231-14	WGWC-10	Water	09/14/16 15:10	09/15/16 09:22
400-127231-15	WGWC-8	Water	09/15/16 09:45	09/16/16 08:19

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Client Sample ID: EB-1 (AP)**

**Date Collected: 09/14/16 08:50**

**Date Received: 09/15/16 09:22**

**Lab Sample ID: 400-127231-1**

**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/11/16 22:08	1
Fluoride	<0.082		0.20	0.082	mg/L			10/11/16 22:08	1
Sulfate	<0.70		1.0	0.70	mg/L			10/11/16 22:08	1

**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		09/28/16 08:30	10/04/16 12:55	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/28/16 08:30	10/04/16 12:55	5
Barium	<0.00049		0.0025	0.00049	mg/L		09/28/16 08:30	10/04/16 12:55	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/04/16 12:55	5
Boron	<0.021		0.050	0.021	mg/L		09/28/16 08:30	10/04/16 12:55	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/04/16 12:55	5
Calcium	<0.13		0.25	0.13	mg/L		09/28/16 08:30	10/04/16 12:55	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/28/16 08:30	10/04/16 12:55	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/28/16 08:30	10/04/16 12:55	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/28/16 08:30	10/04/16 12:55	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/28/16 08:30	10/04/16 12:55	5
<b>Selenium</b>	<b>0.00033</b>	<b>J</b>	0.0013	0.00024	mg/L		09/28/16 08:30	10/04/16 12:55	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/28/16 08:30	10/04/16 12:55	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.00035		0.0013	0.00035	mg/L		09/28/16 08:30	10/05/16 12:59	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		10/03/16 13:49	10/04/16 14:21	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>6.0</b>		5.0	3.4	mg/L			09/21/16 17:45	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWA-5**

**Lab Sample ID: 400-127231-2**

**Date Collected: 09/14/16 08:39**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.1		1.0	0.89	mg/L			10/11/16 22:31	1
Fluoride	0.095	J	0.20	0.082	mg/L			10/11/16 22:31	1
Sulfate	3.4		1.0	0.70	mg/L			10/11/16 22:31	1

### 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		09/28/16 08:30	10/04/16 13:00	5
Arsenic	0.00069	J	0.0013	0.00046	mg/L		09/28/16 08:30	10/04/16 13:00	5
Barium	0.062		0.0025	0.00049	mg/L		09/28/16 08:30	10/04/16 13:00	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/04/16 13:00	5
Boron	<0.021		0.050	0.021	mg/L		09/28/16 08:30	10/04/16 13:00	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/04/16 13:00	5
Calcium	52		0.25	0.13	mg/L		09/28/16 08:30	10/04/16 13:00	5
Chromium	0.0031		0.0025	0.0011	mg/L		09/28/16 08:30	10/04/16 13:00	5
Cobalt	0.013		0.0025	0.00040	mg/L		09/28/16 08:30	10/04/16 13:00	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/28/16 08:30	10/04/16 13:00	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/28/16 08:30	10/04/16 13:00	5
Molybdenum	0.016		0.015	0.00085	mg/L		09/28/16 08:30	10/04/16 13:00	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/28/16 08:30	10/04/16 13:00	5
Thallium	0.000090	J	0.00050	0.000085	mg/L		09/28/16 08:30	10/04/16 13:00	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		10/03/16 13:49	10/04/16 14:22	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	150		5.0	3.4	mg/L			09/21/16 17:45	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-127231-3**

Date Collected: 09/14/16 10:27

Matrix: Water

Date Received: 09/15/16 09:22

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.9		1.0	0.89	mg/L			10/11/16 22:54	1
Fluoride	0.89		0.20	0.082	mg/L			10/11/16 22:54	1
Sulfate	79		5.0	3.5	mg/L			10/11/16 23:16	5

### 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		09/28/16 08:30	10/04/16 13:04	5
Arsenic	0.0024		0.0013	0.00046	mg/L		09/28/16 08:30	10/04/16 13:04	5
Barium	0.020		0.0025	0.00049	mg/L		09/28/16 08:30	10/04/16 13:04	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/04/16 13:04	5
Boron	<0.021		0.050	0.021	mg/L		09/28/16 08:30	10/04/16 13:04	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/04/16 13:04	5
Calcium	37		0.25	0.13	mg/L		09/28/16 08:30	10/04/16 13:04	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/28/16 08:30	10/04/16 13:04	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/28/16 08:30	10/04/16 13:04	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/28/16 08:30	10/04/16 13:04	5
Molybdenum	0.012	J	0.015	0.00085	mg/L		09/28/16 08:30	10/04/16 13:04	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/28/16 08:30	10/04/16 13:04	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/28/16 08:30	10/04/16 13:04	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.00035		0.0013	0.00035	mg/L		09/28/16 08:30	10/05/16 13:03	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		10/03/16 13:49	10/04/16 14:28	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	230		5.0	3.4	mg/L			09/21/16 18:24	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-127231-4**

**Date Collected: 09/14/16 10:30**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	260		20	18	mg/L			10/08/16 17:32	20
Fluoride	0.18	J	0.20	0.082	mg/L			10/07/16 10:53	1
Sulfate	500		20	14	mg/L			10/08/16 17:32	20

### 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		09/28/16 08:30	10/04/16 14:46	5
Arsenic	0.0014		0.0013	0.00046	mg/L		09/28/16 08:30	10/04/16 14:46	5
Barium	0.066		0.0025	0.00049	mg/L		09/28/16 08:30	10/04/16 14:46	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/04/16 14:46	5
Cadmium	0.00037	J	0.0025	0.00034	mg/L		09/28/16 08:30	10/04/16 14:46	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/28/16 08:30	10/04/16 14:46	5
Cobalt	0.013		0.0025	0.00040	mg/L		09/28/16 08:30	10/04/16 14:46	5
Lithium	0.012		0.0050	0.0032	mg/L		09/28/16 08:30	10/04/16 14:46	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/28/16 08:30	10/04/16 14:46	5
Selenium	0.0091		0.0013	0.00024	mg/L		09/28/16 08:30	10/04/16 14:46	5
Thallium	0.00017	J	0.00050	0.000085	mg/L		09/28/16 08:30	10/04/16 14:46	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.8		1.0	0.42	mg/L		09/28/16 08:30	10/04/16 14:51	100
Calcium	230		5.0	2.5	mg/L		09/28/16 08:30	10/04/16 14:51	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.00035		0.0013	0.00035	mg/L		09/28/16 08:30	10/07/16 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		10/03/16 13:49	10/04/16 14:30	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1300		5.0	3.4	mg/L			09/21/16 18:24	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-11**

**Date Collected: 09/14/16 10:30**

**Date Received: 09/15/16 09:22**

**Lab Sample ID: 400-127231-5**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.1</b>		1.0	0.89	mg/L			10/07/16 12:47	1
Fluoride	<0.082		0.20	0.082	mg/L			10/07/16 12:47	1
<b>Sulfate</b>	<b>1.5</b>	<b>B</b>	1.0	0.70	mg/L			10/07/16 12:47	1

### 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		09/28/16 08:30	10/04/16 17:33	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/28/16 08:30	10/04/16 17:33	5
<b>Barium</b>	<b>0.031</b>		0.0025	0.00049	mg/L		09/28/16 08:30	10/04/16 17:33	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/04/16 17:33	5
<b>Calcium</b>	<b>1.8</b>		0.25	0.13	mg/L		09/28/16 08:30	10/04/16 17:33	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/28/16 08:30	10/04/16 17:33	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/28/16 08:30	10/04/16 17:33	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/28/16 08:30	10/04/16 17:33	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/28/16 08:30	10/04/16 17:33	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/28/16 08:30	10/04/16 17:33	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/28/16 08:30	10/04/16 17:33	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/28/16 08:30	10/04/16 17:33	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/05/16 13:12	5
Boron	<0.021		0.050	0.021	mg/L		09/28/16 08:30	10/05/16 13:12	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		10/03/16 13:49	10/04/16 14:31	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>24</b>		5.0	3.4	mg/L			09/21/16 18:24	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-17**

**Date Collected: 09/14/16 10:58**

**Date Received: 09/15/16 09:22**

**Lab Sample ID: 400-127231-6**

**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.6		1.0	0.89	mg/L			10/07/16 13:09	1
Fluoride	0.19	J	0.20	0.082	mg/L			10/07/16 13:09	1
Sulfate	6.6	B	1.0	0.70	mg/L			10/07/16 13:09	1

**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		09/28/16 08:30	10/04/16 17:38	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/28/16 08:30	10/04/16 17:38	5
Barium	0.017		0.0025	0.00049	mg/L		09/28/16 08:30	10/04/16 17:38	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/04/16 17:38	5
Calcium	12		0.25	0.13	mg/L		09/28/16 08:30	10/04/16 17:38	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/28/16 08:30	10/04/16 17:38	5
Cobalt	0.0014	J	0.0025	0.00040	mg/L		09/28/16 08:30	10/04/16 17:38	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/28/16 08:30	10/04/16 17:38	5
Lithium	0.0058		0.0050	0.0032	mg/L		09/28/16 08:30	10/04/16 17:38	5
Molybdenum	0.0081	J	0.015	0.00085	mg/L		09/28/16 08:30	10/04/16 17:38	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/28/16 08:30	10/04/16 17:38	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/28/16 08:30	10/04/16 17:38	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/05/16 13:17	5
Boron	<0.021		0.050	0.021	mg/L		09/28/16 08:30	10/05/16 13:17	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		10/03/16 13:49	10/04/16 14:41	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	82		5.0	3.4	mg/L			09/21/16 18:24	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-13**

**Date Collected: 09/14/16 12:35**

**Date Received: 09/15/16 09:22**

**Lab Sample ID: 400-127231-7**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.6		1.0	0.89	mg/L			10/07/16 13:32	1
Fluoride	0.31		0.20	0.082	mg/L			10/07/16 13:32	1
Sulfate	8.6	B	1.0	0.70	mg/L			10/07/16 13:32	1

### 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		09/28/16 08:30	10/04/16 17:42	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/28/16 08:30	10/04/16 17:42	5
Barium	0.040		0.0025	0.00049	mg/L		09/28/16 08:30	10/04/16 17:42	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/04/16 17:42	5
Calcium	7.4		0.25	0.13	mg/L		09/28/16 08:30	10/04/16 17:42	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/28/16 08:30	10/04/16 17:42	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/28/16 08:30	10/04/16 17:42	5
Lead	0.00055	J	0.0013	0.00035	mg/L		09/28/16 08:30	10/04/16 17:42	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/28/16 08:30	10/04/16 17:42	5
Molybdenum	0.0028	J	0.015	0.00085	mg/L		09/28/16 08:30	10/04/16 17:42	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/28/16 08:30	10/04/16 17:42	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/28/16 08:30	10/04/16 17:42	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/05/16 13:22	5
Boron	<0.021		0.050	0.021	mg/L		09/28/16 08:30	10/05/16 13:22	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		10/03/16 13:49	10/04/16 14:42	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	92		5.0	3.4	mg/L			09/21/16 18:24	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-14**

**Date Collected: 09/14/16 12:50**

**Date Received: 09/15/16 09:22**

**Lab Sample ID: 400-127231-8**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>4.1</b>		1.0	0.89	mg/L			10/07/16 13:55	1
Fluoride	<0.082		0.20	0.082	mg/L			10/07/16 13:55	1
<b>Sulfate</b>	<b>4.3</b>	<b>B</b>	1.0	0.70	mg/L			10/07/16 13:55	1

### 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		09/28/16 08:30	10/04/16 17:47	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/28/16 08:30	10/04/16 17:47	5
<b>Barium</b>	<b>0.15</b>		0.0025	0.00049	mg/L		09/28/16 08:30	10/04/16 17:47	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/04/16 17:47	5
<b>Calcium</b>	<b>5.8</b>		0.25	0.13	mg/L		09/28/16 08:30	10/04/16 17:47	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/28/16 08:30	10/04/16 17:47	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/28/16 08:30	10/04/16 17:47	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/28/16 08:30	10/04/16 17:47	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/28/16 08:30	10/04/16 17:47	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/28/16 08:30	10/04/16 17:47	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/28/16 08:30	10/04/16 17:47	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/28/16 08:30	10/04/16 17:47	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/05/16 13:26	5
<b>Boron</b>	<b>0.041</b>	<b>J</b>	0.050	0.021	mg/L		09/28/16 08:30	10/05/16 13:26	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		10/03/16 13:49	10/04/16 14:43	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>32</b>		5.0	3.4	mg/L			09/21/16 18:24	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-127231-9**

**Date Collected: 09/14/16 12:47**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4		1.0	0.89	mg/L			10/07/16 14:18	1
Fluoride	1.8		0.20	0.082	mg/L			10/07/16 14:18	1
Sulfate	39	B	1.0	0.70	mg/L			10/07/16 14:18	1

### 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		09/28/16 08:30	10/04/16 17:51	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/28/16 08:30	10/04/16 17:51	5
Barium	0.00092	J	0.0025	0.00049	mg/L		09/28/16 08:30	10/04/16 17:51	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/04/16 17:51	5
Calcium	8.8		0.25	0.13	mg/L		09/28/16 08:30	10/04/16 17:51	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/28/16 08:30	10/04/16 17:51	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/28/16 08:30	10/04/16 17:51	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/28/16 08:30	10/04/16 17:51	5
Lithium	0.039		0.0050	0.0032	mg/L		09/28/16 08:30	10/04/16 17:51	5
Molybdenum	0.0071	J	0.015	0.00085	mg/L		09/28/16 08:30	10/04/16 17:51	5
Selenium	0.0024		0.0013	0.00024	mg/L		09/28/16 08:30	10/04/16 17:51	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/28/16 08:30	10/04/16 17:51	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/05/16 13:31	5
Boron	0.30		0.050	0.021	mg/L		09/28/16 08:30	10/05/16 13:31	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		10/03/16 13:49	10/04/16 14:45	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	140		5.0	3.4	mg/L			09/21/16 18:24	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Client Sample ID: FB-2 (AP)**

**Lab Sample ID: 400-127231-10**

**Date Collected: 09/14/16 13:00**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/07/16 14:41	1
Fluoride	<0.082		0.20	0.082	mg/L			10/07/16 14:41	1
Sulfate	<0.70		1.0	0.70	mg/L			10/07/16 14:41	1

### 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		09/28/16 08:30	10/04/16 17:55	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/28/16 08:30	10/04/16 17:55	5
Barium	<0.00049		0.0025	0.00049	mg/L		09/28/16 08:30	10/04/16 17:55	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/04/16 17:55	5
Calcium	<0.13		0.25	0.13	mg/L		09/28/16 08:30	10/04/16 17:55	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/28/16 08:30	10/04/16 17:55	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/28/16 08:30	10/04/16 17:55	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/28/16 08:30	10/04/16 17:55	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/28/16 08:30	10/04/16 17:55	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/28/16 08:30	10/04/16 17:55	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/28/16 08:30	10/04/16 17:55	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/28/16 08:30	10/04/16 17:55	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/05/16 13:35	5
Boron	<0.021		0.050	0.021	mg/L		09/28/16 08:30	10/05/16 13:35	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		10/03/16 13:49	10/04/16 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			09/21/16 18:24	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Client Sample ID: EB-2 (AP)**

**Lab Sample ID: 400-127231-11**

**Date Collected: 09/14/16 13:15**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/07/16 15:04	1
Fluoride	<0.082		0.20	0.082	mg/L			10/07/16 15:04	1
Sulfate	<0.70		1.0	0.70	mg/L			10/07/16 15:04	1

### 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		09/28/16 08:30	10/04/16 18:00	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/28/16 08:30	10/04/16 18:00	5
Barium	<0.00049		0.0025	0.00049	mg/L		09/28/16 08:30	10/04/16 18:00	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/04/16 18:00	5
Calcium	<0.13		0.25	0.13	mg/L		09/28/16 08:30	10/04/16 18:00	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/28/16 08:30	10/04/16 18:00	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/28/16 08:30	10/04/16 18:00	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/28/16 08:30	10/04/16 18:00	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/28/16 08:30	10/04/16 18:00	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/28/16 08:30	10/04/16 18:00	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/28/16 08:30	10/04/16 18:00	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/28/16 08:30	10/04/16 18:00	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/05/16 13:40	5
Boron	<0.021		0.050	0.021	mg/L		09/28/16 08:30	10/05/16 13:40	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		10/03/16 13:49	10/04/16 14:47	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 18:24	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-127231-12**

**Date Collected: 09/13/16 15:17**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4		1.0	0.89	mg/L			10/07/16 15:26	1
Fluoride	0.15	J	0.20	0.082	mg/L			10/07/16 15:26	1
Sulfate	5.6	B	1.0	0.70	mg/L			10/07/16 15:26	1

### 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		09/28/16 08:30	10/04/16 18:04	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/28/16 08:30	10/04/16 18:04	5
Barium	0.0058		0.0025	0.00049	mg/L		09/28/16 08:30	10/04/16 18:04	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/04/16 18:04	5
Calcium	16		0.25	0.13	mg/L		09/28/16 08:30	10/04/16 18:04	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/28/16 08:30	10/04/16 18:04	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/28/16 08:30	10/04/16 18:04	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/28/16 08:30	10/04/16 18:04	5
Lithium	0.0042	J	0.0050	0.0032	mg/L		09/28/16 08:30	10/04/16 18:04	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/28/16 08:30	10/04/16 18:04	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/28/16 08:30	10/04/16 18:04	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/28/16 08:30	10/04/16 18:04	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/05/16 14:07	5
Boron	<0.021		0.050	0.021	mg/L		09/28/16 08:30	10/05/16 14:07	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		10/03/16 13:49	10/04/16 14:48	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	28		5.0	3.4	mg/L			09/20/16 18:08	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-127231-13**

**Date Collected: 09/14/16 12:50**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.7		1.0	0.89	mg/L			10/07/16 18:20	1
Fluoride	0.095	J	0.20	0.082	mg/L			10/07/16 18:20	1
Sulfate	16	B	1.0	0.70	mg/L			10/07/16 18:20	1

### 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		09/28/16 08:30	10/04/16 18:09	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/28/16 08:30	10/04/16 18:09	5
Barium	0.020		0.0025	0.00049	mg/L		09/28/16 08:30	10/04/16 18:09	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/04/16 18:09	5
Calcium	16		0.25	0.13	mg/L		09/28/16 08:30	10/04/16 18:09	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/28/16 08:30	10/04/16 18:09	5
Cobalt	0.00098	J	0.0025	0.00040	mg/L		09/28/16 08:30	10/04/16 18:09	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/28/16 08:30	10/04/16 18:09	5
Lithium	0.0077		0.0050	0.0032	mg/L		09/28/16 08:30	10/04/16 18:09	5
Molybdenum	0.00090	J	0.015	0.00085	mg/L		09/28/16 08:30	10/04/16 18:09	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/28/16 08:30	10/04/16 18:09	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/28/16 08:30	10/04/16 18:09	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/05/16 14:12	5
Boron	<0.021		0.050	0.021	mg/L		09/28/16 08:30	10/05/16 14:12	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		10/03/16 13:49	10/04/16 14:49	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	96		5.0	3.4	mg/L			09/21/16 18:24	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-127231-14**

**Date Collected: 09/14/16 15:10**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.5		1.0	0.89	mg/L			10/07/16 18:43	1
Fluoride	0.17	J	0.20	0.082	mg/L			10/07/16 18:43	1
Sulfate	2.8	B	1.0	0.70	mg/L			10/07/16 18:43	1

### 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		09/28/16 08:30	10/04/16 18:26	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/28/16 08:30	10/04/16 18:26	5
Barium	0.035		0.0025	0.00049	mg/L		09/28/16 08:30	10/04/16 18:26	5
Boron	<0.021		0.050	0.021	mg/L		09/28/16 08:30	10/04/16 18:26	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/04/16 18:26	5
Calcium	7.7		0.25	0.13	mg/L		09/28/16 08:30	10/04/16 18:26	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/28/16 08:30	10/04/16 18:26	5
Cobalt	0.00095	J	0.0025	0.00040	mg/L		09/28/16 08:30	10/04/16 18:26	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/28/16 08:30	10/04/16 18:26	5
Lithium	0.020		0.0050	0.0032	mg/L		09/28/16 08:30	10/04/16 18:26	5
Molybdenum	0.00091	J	0.015	0.00085	mg/L		09/28/16 08:30	10/04/16 18:26	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/28/16 08:30	10/04/16 18:26	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/28/16 08:30	10/04/16 18:26	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/05/16 14:16	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		10/03/16 13:49	10/04/16 14:51	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	40		5.0	3.4	mg/L			09/21/16 18:24	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-127231-15**

**Date Collected: 09/15/16 09:45**

**Matrix: Water**

**Date Received: 09/16/16 08:19**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19		1.0	0.89	mg/L			10/07/16 19:29	1
Fluoride	0.24		0.20	0.082	mg/L			10/07/16 19:29	1
Sulfate	140		5.0	3.5	mg/L			10/10/16 18:35	5

### 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		09/28/16 08:30	10/04/16 18:31	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/28/16 08:30	10/04/16 18:31	5
Barium	0.0039		0.0025	0.00049	mg/L		09/28/16 08:30	10/04/16 18:31	5
Boron	1.2		0.050	0.021	mg/L		09/28/16 08:30	10/04/16 18:31	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/04/16 18:31	5
Calcium	27		0.25	0.13	mg/L		09/28/16 08:30	10/04/16 18:31	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/28/16 08:30	10/04/16 18:31	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/28/16 08:30	10/04/16 18:31	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/28/16 08:30	10/04/16 18:31	5
Lithium	0.057		0.0050	0.0032	mg/L		09/28/16 08:30	10/04/16 18:31	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/28/16 08:30	10/04/16 18:31	5
Selenium	0.0034		0.0013	0.00024	mg/L		09/28/16 08:30	10/04/16 18:31	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/28/16 08:30	10/04/16 18:31	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.00093	J	0.0025	0.00034	mg/L		09/28/16 08:30	10/05/16 14:21	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00011	J	0.00020	0.000070	mg/L		10/03/16 13:49	10/04/16 15:02	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	270		5.0	3.4	mg/L			09/22/16 18:31	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

## Qualifiers

### HPLC/IC

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.
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.
E	Result exceeded calibration range.

### 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.

## 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 Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Client Sample ID: EB-1 (AP)**

**Date Collected: 09/14/16 08:50**

**Date Received: 09/15/16 09:22**

**Lab Sample ID: 400-127231-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326381	10/11/16 22:08	TAJ	TAL PEN
Total Recoverable	Prep	3005A			324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	325417	10/04/16 12:55	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325605	10/05/16 12:59	AJR	TAL PEN
Total/NA	Prep	7470A			325126	10/03/16 13:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325332	10/04/16 14:21	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323631	09/21/16 17:45	TET	TAL PEN

**Client Sample ID: WGWA-5**

**Date Collected: 09/14/16 08:39**

**Date Received: 09/15/16 09:22**

**Lab Sample ID: 400-127231-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326381	10/11/16 22:31	TAJ	TAL PEN
Total Recoverable	Prep	3005A			324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	325417	10/04/16 13:00	AJR	TAL PEN
Total/NA	Prep	7470A			325126	10/03/16 13:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325332	10/04/16 14:22	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323631	09/21/16 17:45	TET	TAL PEN

**Client Sample ID: WGWC-15**

**Date Collected: 09/14/16 10:27**

**Date Received: 09/15/16 09:22**

**Lab Sample ID: 400-127231-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326381	10/11/16 22:54	TAJ	TAL PEN
Total/NA	Analysis	300.0		5	326381	10/11/16 23:16	TAJ	TAL PEN
Total Recoverable	Prep	3005A			324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	325417	10/04/16 13:04	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325605	10/05/16 13:03	AJR	TAL PEN
Total/NA	Prep	7470A			325126	10/03/16 13:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325332	10/04/16 14:28	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323633	09/21/16 18:24	TET	TAL PEN

**Client Sample ID: WGWC-16**

**Date Collected: 09/14/16 10:30**

**Date Received: 09/15/16 09:22**

**Lab Sample ID: 400-127231-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	325845	10/07/16 10:53	TAJ	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-127231-4**

**Date Collected: 09/14/16 10:30**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20	326101	10/08/16 17:32	TAJ	TAL PEN
Total Recoverable	Prep	3005A			324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	325417	10/04/16 14:46	AJR	TAL PEN
Total Recoverable	Prep	3005A	DL		324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020	DL	100	325417	10/04/16 14:51	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325862	10/07/16 20:01	AJR	TAL PEN
Total/NA	Prep	7470A			325126	10/03/16 13:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325332	10/04/16 14:30	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323633	09/21/16 18:24	TET	TAL PEN

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-127231-5**

**Date Collected: 09/14/16 10:30**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	325845	10/07/16 12:47	TAJ	TAL PEN
Total Recoverable	Prep	3005A			324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	325417	10/04/16 17:33	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325605	10/05/16 13:12	AJR	TAL PEN
Total/NA	Prep	7470A			325126	10/03/16 13:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325332	10/04/16 14:31	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323633	09/21/16 18:24	TET	TAL PEN

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-127231-6**

**Date Collected: 09/14/16 10:58**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	325845	10/07/16 13:09	TAJ	TAL PEN
Total Recoverable	Prep	3005A			324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	325417	10/04/16 17:38	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325605	10/05/16 13:17	AJR	TAL PEN
Total/NA	Prep	7470A			325126	10/03/16 13:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325332	10/04/16 14:41	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323633	09/21/16 18:24	TET	TAL PEN

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-127231-7**

**Date Collected: 09/14/16 12:35**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	325845	10/07/16 13:32	TAJ	TAL PEN
Total Recoverable	Prep	3005A			324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	325417	10/04/16 17:42	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325605	10/05/16 13:22	AJR	TAL PEN
Total/NA	Prep	7470A			325126	10/03/16 13:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325332	10/04/16 14:42	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323633	09/21/16 18:24	TET	TAL PEN

**Client Sample ID: WGWC-14**

**Lab Sample ID: 400-127231-8**

**Date Collected: 09/14/16 12:50**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	325845	10/07/16 13:55	TAJ	TAL PEN
Total Recoverable	Prep	3005A			324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	325417	10/04/16 17:47	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325605	10/05/16 13:26	AJR	TAL PEN
Total/NA	Prep	7470A			325126	10/03/16 13:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325332	10/04/16 14:43	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323633	09/21/16 18:24	TET	TAL PEN

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-127231-9**

**Date Collected: 09/14/16 12:47**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	325845	10/07/16 14:18	TAJ	TAL PEN
Total Recoverable	Prep	3005A			324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	325417	10/04/16 17:51	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325605	10/05/16 13:31	AJR	TAL PEN
Total/NA	Prep	7470A			325126	10/03/16 13:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325332	10/04/16 14:45	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323633	09/21/16 18:24	TET	TAL PEN



# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Client Sample ID: FB-2 (AP)**

**Lab Sample ID: 400-127231-10**

**Date Collected: 09/14/16 13:00**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	325845	10/07/16 14:41	TAJ	TAL PEN
Total Recoverable	Prep	3005A			324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	325417	10/04/16 17:55	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325605	10/05/16 13:35	AJR	TAL PEN
Total/NA	Prep	7470A			325126	10/03/16 13:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325332	10/04/16 14:46	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323633	09/21/16 18:24	TET	TAL PEN

**Client Sample ID: EB-2 (AP)**

**Lab Sample ID: 400-127231-11**

**Date Collected: 09/14/16 13:15**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	325845	10/07/16 15:04	TAJ	TAL PEN
Total Recoverable	Prep	3005A			324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	325417	10/04/16 18:00	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325605	10/05/16 13:40	AJR	TAL PEN
Total/NA	Prep	7470A			325126	10/03/16 13:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325332	10/04/16 14:47	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323633	09/21/16 18:24	TET	TAL PEN

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-127231-12**

**Date Collected: 09/13/16 15:17**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	325845	10/07/16 15:26	TAJ	TAL PEN
Total Recoverable	Prep	3005A			324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	325417	10/04/16 18:04	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325605	10/05/16 14:07	AJR	TAL PEN
Total/NA	Prep	7470A			325126	10/03/16 13:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325332	10/04/16 14:48	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323428	09/20/16 18:08	TET	TAL PEN

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-127231-13**

**Date Collected: 09/14/16 12:50**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	325845	10/07/16 18:20	TAJ	TAL PEN
Total Recoverable	Prep	3005A			324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	325417	10/04/16 18:09	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325605	10/05/16 14:12	AJR	TAL PEN
Total/NA	Prep	7470A			325126	10/03/16 13:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325332	10/04/16 14:49	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323633	09/21/16 18:24	TET	TAL PEN

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-127231-14**

**Date Collected: 09/14/16 15:10**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	325845	10/07/16 18:43	TAJ	TAL PEN
Total Recoverable	Prep	3005A			324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	325417	10/04/16 18:26	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325605	10/05/16 14:16	AJR	TAL PEN
Total/NA	Prep	7470A			325126	10/03/16 13:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325332	10/04/16 14:51	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323633	09/21/16 18:24	TET	TAL PEN

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-127231-15**

**Date Collected: 09/15/16 09:45**

**Matrix: Water**

**Date Received: 09/16/16 08:19**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	325845	10/07/16 19:29	TAJ	TAL PEN
Total/NA	Analysis	300.0		5	326210	10/10/16 18:35	TAJ	TAL PEN
Total Recoverable	Prep	3005A			324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	325417	10/04/16 18:31	AJR	TAL PEN
Total Recoverable	Prep	3005A	RA		324311	09/28/16 08:30	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	325605	10/05/16 14:21	AJR	TAL PEN
Total/NA	Prep	7470A			325126	10/03/16 13:49	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325332	10/04/16 15:02	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	323794	09/22/16 18:31	TET	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 Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

## HPLC/IC

### Analysis Batch: 325845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127231-4	WGWC-16	Total/NA	Water	300.0	
400-127231-5	WGWC-11	Total/NA	Water	300.0	
400-127231-6	WGWC-17	Total/NA	Water	300.0	
400-127231-7	WGWC-13	Total/NA	Water	300.0	
400-127231-8	WGWC-14	Total/NA	Water	300.0	
400-127231-9	WGWC-9	Total/NA	Water	300.0	
400-127231-10	FB-2 (AP)	Total/NA	Water	300.0	
400-127231-11	EB-2 (AP)	Total/NA	Water	300.0	
400-127231-12	WGWA-4	Total/NA	Water	300.0	
400-127231-13	WGWC-12	Total/NA	Water	300.0	
400-127231-14	WGWC-10	Total/NA	Water	300.0	
400-127231-15	WGWC-8	Total/NA	Water	300.0	
MB 400-325845/4	Method Blank	Total/NA	Water	300.0	
LCS 400-325845/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-325845/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-127231-4 MS	WGWC-16	Total/NA	Water	300.0	
400-127231-4 MSD	WGWC-16	Total/NA	Water	300.0	
400-127231-14 MS	WGWC-10	Total/NA	Water	300.0	

### Analysis Batch: 326101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127231-4	WGWC-16	Total/NA	Water	300.0	
MB 400-326101/4	Method Blank	Total/NA	Water	300.0	
LCS 400-326101/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-326101/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-127231-4 MS	WGWC-16	Total/NA	Water	300.0	
400-127231-4 MSD	WGWC-16	Total/NA	Water	300.0	

### Analysis Batch: 326210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127231-15	WGWC-8	Total/NA	Water	300.0	
MB 400-326210/4	Method Blank	Total/NA	Water	300.0	
LCS 400-326210/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-326210/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-127303-A-15 MS	Matrix Spike	Total/NA	Water	300.0	
400-127303-A-15 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 326381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127231-1	EB-1 (AP)	Total/NA	Water	300.0	
400-127231-2	WGWA-5	Total/NA	Water	300.0	
400-127231-3	WGWC-15	Total/NA	Water	300.0	
400-127231-3	WGWC-15	Total/NA	Water	300.0	
MB 400-326381/4	Method Blank	Total/NA	Water	300.0	
LCS 400-326381/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-326381/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-127914-B-5 MS	Matrix Spike	Total/NA	Water	300.0	
400-128017-A-4 MS	Matrix Spike	Total/NA	Water	300.0	
400-128017-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

## Metals

### Prep Batch: 324311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127231-1 - RA	EB-1 (AP)	Total Recoverable	Water	3005A	
400-127231-1	EB-1 (AP)	Total Recoverable	Water	3005A	
400-127231-2	WGWA-5	Total Recoverable	Water	3005A	
400-127231-3 - RA	WGWC-15	Total Recoverable	Water	3005A	
400-127231-3	WGWC-15	Total Recoverable	Water	3005A	
400-127231-4	WGWC-16	Total Recoverable	Water	3005A	
400-127231-4 - DL	WGWC-16	Total Recoverable	Water	3005A	
400-127231-4 - RA	WGWC-16	Total Recoverable	Water	3005A	
400-127231-5 - RA	WGWC-11	Total Recoverable	Water	3005A	
400-127231-5	WGWC-11	Total Recoverable	Water	3005A	
400-127231-6 - RA	WGWC-17	Total Recoverable	Water	3005A	
400-127231-6	WGWC-17	Total Recoverable	Water	3005A	
400-127231-7	WGWC-13	Total Recoverable	Water	3005A	
400-127231-7 - RA	WGWC-13	Total Recoverable	Water	3005A	
400-127231-8 - RA	WGWC-14	Total Recoverable	Water	3005A	
400-127231-8	WGWC-14	Total Recoverable	Water	3005A	
400-127231-9 - RA	WGWC-9	Total Recoverable	Water	3005A	
400-127231-9	WGWC-9	Total Recoverable	Water	3005A	
400-127231-10	FB-2 (AP)	Total Recoverable	Water	3005A	
400-127231-10 - RA	FB-2 (AP)	Total Recoverable	Water	3005A	
400-127231-11	EB-2 (AP)	Total Recoverable	Water	3005A	
400-127231-11 - RA	EB-2 (AP)	Total Recoverable	Water	3005A	
400-127231-12	WGWA-4	Total Recoverable	Water	3005A	
400-127231-12 - RA	WGWA-4	Total Recoverable	Water	3005A	
400-127231-13 - RA	WGWC-12	Total Recoverable	Water	3005A	
400-127231-13	WGWC-12	Total Recoverable	Water	3005A	
400-127231-14 - RA	WGWC-10	Total Recoverable	Water	3005A	
400-127231-14	WGWC-10	Total Recoverable	Water	3005A	
400-127231-15 - RA	WGWC-8	Total Recoverable	Water	3005A	
400-127231-15	WGWC-8	Total Recoverable	Water	3005A	
MB 400-324311/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-324311/2-A ^1	Lab Control Sample	Total Recoverable	Water	3005A	
400-127231-3 MS	WGWC-15	Total Recoverable	Water	3005A	
400-127231-3 MSD	WGWC-15	Total Recoverable	Water	3005A	

### Prep Batch: 325126

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127231-1	EB-1 (AP)	Total/NA	Water	7470A	
400-127231-2	WGWA-5	Total/NA	Water	7470A	
400-127231-3	WGWC-15	Total/NA	Water	7470A	
400-127231-4	WGWC-16	Total/NA	Water	7470A	
400-127231-5	WGWC-11	Total/NA	Water	7470A	
400-127231-6	WGWC-17	Total/NA	Water	7470A	
400-127231-7	WGWC-13	Total/NA	Water	7470A	
400-127231-8	WGWC-14	Total/NA	Water	7470A	
400-127231-9	WGWC-9	Total/NA	Water	7470A	
400-127231-10	FB-2 (AP)	Total/NA	Water	7470A	
400-127231-11	EB-2 (AP)	Total/NA	Water	7470A	
400-127231-12	WGWA-4	Total/NA	Water	7470A	
400-127231-13	WGWC-12	Total/NA	Water	7470A	
400-127231-14	WGWC-10	Total/NA	Water	7470A	

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
 SDG: Wansley AP CCR GW

## Metals (Continued)

### Prep Batch: 325126 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127231-15	WGWC-8	Total/NA	Water	7470A	
MB 400-325126/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-325126/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-127231-2 MS	WGWA-5	Total/NA	Water	7470A	
400-127231-2 MSD	WGWA-5	Total/NA	Water	7470A	

### Analysis Batch: 325332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127231-1	EB-1 (AP)	Total/NA	Water	7470A	325126
400-127231-2	WGWA-5	Total/NA	Water	7470A	325126
400-127231-3	WGWC-15	Total/NA	Water	7470A	325126
400-127231-4	WGWC-16	Total/NA	Water	7470A	325126
400-127231-5	WGWC-11	Total/NA	Water	7470A	325126
400-127231-6	WGWC-17	Total/NA	Water	7470A	325126
400-127231-7	WGWC-13	Total/NA	Water	7470A	325126
400-127231-8	WGWC-14	Total/NA	Water	7470A	325126
400-127231-9	WGWC-9	Total/NA	Water	7470A	325126
400-127231-10	FB-2 (AP)	Total/NA	Water	7470A	325126
400-127231-11	EB-2 (AP)	Total/NA	Water	7470A	325126
400-127231-12	WGWA-4	Total/NA	Water	7470A	325126
400-127231-13	WGWC-12	Total/NA	Water	7470A	325126
400-127231-14	WGWC-10	Total/NA	Water	7470A	325126
400-127231-15	WGWC-8	Total/NA	Water	7470A	325126
MB 400-325126/14-A	Method Blank	Total/NA	Water	7470A	325126
LCS 400-325126/15-A	Lab Control Sample	Total/NA	Water	7470A	325126
400-127231-2 MS	WGWA-5	Total/NA	Water	7470A	325126
400-127231-2 MSD	WGWA-5	Total/NA	Water	7470A	325126

### Analysis Batch: 325417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127231-1	EB-1 (AP)	Total Recoverable	Water	6020	324311
400-127231-2	WGWA-5	Total Recoverable	Water	6020	324311
400-127231-3	WGWC-15	Total Recoverable	Water	6020	324311
400-127231-4	WGWC-16	Total Recoverable	Water	6020	324311
400-127231-4 - DL	WGWC-16	Total Recoverable	Water	6020	324311
400-127231-5	WGWC-11	Total Recoverable	Water	6020	324311
400-127231-6	WGWC-17	Total Recoverable	Water	6020	324311
400-127231-7	WGWC-13	Total Recoverable	Water	6020	324311
400-127231-8	WGWC-14	Total Recoverable	Water	6020	324311
400-127231-9	WGWC-9	Total Recoverable	Water	6020	324311
400-127231-10	FB-2 (AP)	Total Recoverable	Water	6020	324311
400-127231-11	EB-2 (AP)	Total Recoverable	Water	6020	324311
400-127231-12	WGWA-4	Total Recoverable	Water	6020	324311
400-127231-13	WGWC-12	Total Recoverable	Water	6020	324311
400-127231-14	WGWC-10	Total Recoverable	Water	6020	324311
400-127231-15	WGWC-8	Total Recoverable	Water	6020	324311
MB 400-324311/1-A ^5	Method Blank	Total Recoverable	Water	6020	324311
MB 400-324311/1-A ^5	Method Blank	Total Recoverable	Water	6020	324311
LCS 400-324311/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	324311
400-127231-3 MS	WGWC-15	Total Recoverable	Water	6020	324311
400-127231-3 MSD	WGWC-15	Total Recoverable	Water	6020	324311

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

## Analysis Batch: 325605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127231-1 - RA	EB-1 (AP)	Total Recoverable	Water	6020	324311
400-127231-3 - RA	WGWC-15	Total Recoverable	Water	6020	324311
400-127231-5 - RA	WGWC-11	Total Recoverable	Water	6020	324311
400-127231-6 - RA	WGWC-17	Total Recoverable	Water	6020	324311
400-127231-7 - RA	WGWC-13	Total Recoverable	Water	6020	324311
400-127231-8 - RA	WGWC-14	Total Recoverable	Water	6020	324311
400-127231-9 - RA	WGWC-9	Total Recoverable	Water	6020	324311
400-127231-10 - RA	FB-2 (AP)	Total Recoverable	Water	6020	324311
400-127231-11 - RA	EB-2 (AP)	Total Recoverable	Water	6020	324311
400-127231-12 - RA	WGWA-4	Total Recoverable	Water	6020	324311
400-127231-13 - RA	WGWC-12	Total Recoverable	Water	6020	324311
400-127231-14 - RA	WGWC-10	Total Recoverable	Water	6020	324311
400-127231-15 - RA	WGWC-8	Total Recoverable	Water	6020	324311

## Analysis Batch: 325862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127231-4 - RA	WGWC-16	Total Recoverable	Water	6020	324311

## General Chemistry

### Analysis Batch: 323428

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127231-12	WGWA-4	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-A-2 DU	Duplicate	Total/NA	Water	SM 2540C	

### Analysis Batch: 323631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127231-1	EB-1 (AP)	Total/NA	Water	SM 2540C	
400-127231-2	WGWA-5	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	
400-127231-2 DU	WGWA-5	Total/NA	Water	SM 2540C	

### Analysis Batch: 323633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127231-3	WGWC-15	Total/NA	Water	SM 2540C	
400-127231-4	WGWC-16	Total/NA	Water	SM 2540C	
400-127231-5	WGWC-11	Total/NA	Water	SM 2540C	
400-127231-6	WGWC-17	Total/NA	Water	SM 2540C	
400-127231-7	WGWC-13	Total/NA	Water	SM 2540C	
400-127231-8	WGWC-14	Total/NA	Water	SM 2540C	
400-127231-9	WGWC-9	Total/NA	Water	SM 2540C	
400-127231-10	FB-2 (AP)	Total/NA	Water	SM 2540C	
400-127231-11	EB-2 (AP)	Total/NA	Water	SM 2540C	
400-127231-13	WGWC-12	Total/NA	Water	SM 2540C	
400-127231-14	WGWC-10	Total/NA	Water	SM 2540C	
MB 400-323633/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-323633/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-127231-3 DU	WGWC-15	Total/NA	Water	SM 2540C	
400-127231-14 DU	WGWC-10	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

## General Chemistry (Continued)

### Analysis Batch: 323794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127231-15	WGWC-8	Total/NA	Water	SM 2540C	
MB 400-323794/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-323794/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-127231-15 DU	WGWC-8	Total/NA	Water	SM 2540C	

- 1
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- 13
- 14

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 400-325845/4**  
**Matrix: Water**  
**Analysis Batch: 325845**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/07/16 09:44	1
Fluoride	<0.082		0.20	0.082	mg/L			10/07/16 09:44	1
Sulfate	0.701	J	1.0	0.70	mg/L			10/07/16 09:44	1

**Lab Sample ID: LCS 400-325845/5**  
**Matrix: Water**  
**Analysis Batch: 325845**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.70		mg/L		97	90 - 110
Fluoride	10.0	10.2		mg/L		102	90 - 110
Sulfate	10.0	10.1		mg/L		101	90 - 110

**Lab Sample ID: LCSD 400-325845/6**  
**Matrix: Water**  
**Analysis Batch: 325845**

**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	10.0	9.68		mg/L		97	90 - 110	0	15
Fluoride	10.0	10.2		mg/L		102	90 - 110	0	15
Sulfate	10.0	10.1		mg/L		101	90 - 110	0	15

**Lab Sample ID: 400-127231-4 MS**  
**Matrix: Water**  
**Analysis Batch: 325845**

**Client Sample ID: WGWC-16**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	E	10.0	255	E 4	mg/L		59	80 - 120
Fluoride	0.18	J	10.0	11.2		mg/L		110	80 - 120
Sulfate	460	E B	10.0	466	E 4	mg/L		78	80 - 120

**Lab Sample ID: 400-127231-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 325845**

**Client Sample ID: WGWC-16**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	E	10.0	255	E 4	mg/L		63	80 - 120	0	20
Fluoride	0.18	J	10.0	11.3		mg/L		111	80 - 120	0	20
Sulfate	460	E B	10.0	476	E 4	mg/L		172	80 - 120	2	20

**Lab Sample ID: 400-127231-14 MS**  
**Matrix: Water**  
**Analysis Batch: 325845**

**Client Sample ID: WGWC-10**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.5		10.0	11.7		mg/L		101	80 - 120
Fluoride	0.17	J	10.0	10.8		mg/L		106	80 - 120
Sulfate	2.8	B	10.0	13.4		mg/L		106	80 - 120

TestAmerica Pensacola



# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: MB 400-326101/4**  
**Matrix: Water**  
**Analysis Batch: 326101**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/08/16 16:24	1
Fluoride	<0.082		0.20	0.082	mg/L			10/08/16 16:24	1
Sulfate	<0.70		1.0	0.70	mg/L			10/08/16 16:24	1

**Lab Sample ID: LCS 400-326101/5**  
**Matrix: Water**  
**Analysis Batch: 326101**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.80		mg/L		98	90 - 110
Fluoride	10.0	10.2		mg/L		102	90 - 110
Sulfate	10.0	10.1		mg/L		101	90 - 110

**Lab Sample ID: LCSD 400-326101/6**  
**Matrix: Water**  
**Analysis Batch: 326101**

**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	10.0	9.94		mg/L		99	90 - 110	1	15
Fluoride	10.0	10.3		mg/L		103	90 - 110	1	15
Sulfate	10.0	10.2		mg/L		102	90 - 110	2	15

**Lab Sample ID: 400-127231-4 MS**  
**Matrix: Water**  
**Analysis Batch: 326101**

**Client Sample ID: WGWC-16**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	260		200	452		mg/L		95	80 - 120
Fluoride	<1.6		200	212		mg/L		106	80 - 120
Sulfate	500		200	689		mg/L		97	80 - 120

**Lab Sample ID: 400-127231-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 326101**

**Client Sample ID: WGWC-16**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	260		200	453		mg/L		95	80 - 120	0	20
Fluoride	<1.6		200	211		mg/L		106	80 - 120	0	20
Sulfate	500		200	694		mg/L		99	80 - 120	1	20

**Lab Sample ID: MB 400-326210/4**  
**Matrix: Water**  
**Analysis Batch: 326210**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/10/16 14:02	1
Fluoride	<0.082		0.20	0.082	mg/L			10/10/16 14:02	1
Sulfate	<0.70		1.0	0.70	mg/L			10/10/16 14:02	1

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 400-326210/5**  
**Matrix: Water**  
**Analysis Batch: 326210**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.68		mg/L		97	90 - 110
Fluoride	10.0	10.1		mg/L		101	90 - 110
Sulfate	10.0	10.0		mg/L		100	90 - 110

**Lab Sample ID: LCSD 400-326210/6**  
**Matrix: Water**  
**Analysis Batch: 326210**

**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	10.0	9.69		mg/L		97	90 - 110	0	15
Fluoride	10.0	10.1		mg/L		101	90 - 110	0	15
Sulfate	10.0	9.98		mg/L		100	90 - 110	0	15

**Lab Sample ID: 400-127303-A-15 MS**  
**Matrix: Water**  
**Analysis Batch: 326210**

**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	110		50.0	158		mg/L		98	80 - 120
Fluoride	<0.41		50.0	53.0		mg/L		106	80 - 120
Sulfate	14		50.0	66.3		mg/L		105	80 - 120

**Lab Sample ID: 400-127303-A-15 MSD**  
**Matrix: Water**  
**Analysis Batch: 326210**

**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	110		50.0	158		mg/L		98	80 - 120	0	20
Fluoride	<0.41		50.0	53.1		mg/L		106	80 - 120	0	20
Sulfate	14		50.0	66.1		mg/L		105	80 - 120	0	20

**Lab Sample ID: MB 400-326381/4**  
**Matrix: Water**  
**Analysis Batch: 326381**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/11/16 13:23	1
Fluoride	<0.082		0.20	0.082	mg/L			10/11/16 13:23	1
Sulfate	<0.70		1.0	0.70	mg/L			10/11/16 13:23	1

**Lab Sample ID: LCS 400-326381/5**  
**Matrix: Water**  
**Analysis Batch: 326381**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.60		mg/L		96	90 - 110
Fluoride	10.0	10.0		mg/L		100	90 - 110
Sulfate	10.0	9.87		mg/L		99	90 - 110

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCSD 400-326381/6**  
**Matrix: Water**  
**Analysis Batch: 326381**

**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	10.0	9.65		mg/L		97	90 - 110	1	15
Fluoride	10.0	10.2		mg/L		102	90 - 110	1	15
Sulfate	10.0	9.97		mg/L		100	90 - 110	1	15

**Lab Sample ID: 400-127914-B-5 MS**  
**Matrix: Water**  
**Analysis Batch: 326381**

**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	<0.89		10.0	10.5		mg/L		105	80 - 120
Fluoride	<0.082		10.0	11.0		mg/L		110	80 - 120
Sulfate	<0.70		10.0	11.0		mg/L		110	80 - 120

**Lab Sample ID: 400-128017-A-4 MS**  
**Matrix: Water**  
**Analysis Batch: 326381**

**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	24		50.0	72.8		mg/L		98	80 - 120
Fluoride	<0.41		50.0	52.3		mg/L		105	80 - 120
Sulfate	50		50.0	100		mg/L		101	80 - 120

**Lab Sample ID: 400-128017-A-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 326381**

**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	24		50.0	72.8		mg/L		98	80 - 120	0	20
Fluoride	<0.41		50.0	52.6		mg/L		105	80 - 120	0	20
Sulfate	50		50.0	101		mg/L		102	80 - 120	0	20

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

**Lab Sample ID: MB 400-324311/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 325417**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 324311**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/28/16 08:30	10/04/16 12:46	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/28/16 08:30	10/04/16 12:46	5
Barium	<0.00049		0.0025	0.00049	mg/L		09/28/16 08:30	10/04/16 12:46	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/04/16 12:46	5
Boron	<0.021		0.050	0.021	mg/L		09/28/16 08:30	10/04/16 12:46	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/28/16 08:30	10/04/16 12:46	5
Calcium	<0.13		0.25	0.13	mg/L		09/28/16 08:30	10/04/16 12:46	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/28/16 08:30	10/04/16 12:46	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/28/16 08:30	10/04/16 12:46	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/28/16 08:30	10/04/16 12:46	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/28/16 08:30	10/04/16 12:46	5

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

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

**Lab Sample ID: MB 400-324311/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 325417**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 324311**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	<0.00024		0.0013	0.00024	mg/L		09/28/16 08:30	10/04/16 12:46	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/28/16 08:30	10/04/16 12:46	5

**Lab Sample ID: MB 400-324311/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 325417**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 324311**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.00035		0.0013	0.00035	mg/L		09/28/16 08:30	10/04/16 18:57	5

**Lab Sample ID: LCS 400-324311/2-A ^1**  
**Matrix: Water**  
**Analysis Batch: 325417**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 324311**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0526		mg/L		105	80 - 120
Arsenic	0.0500	0.0524		mg/L		105	80 - 120
Barium	0.0500	0.0485		mg/L		97	80 - 120
Beryllium	0.0500	0.0467		mg/L		93	80 - 120
Boron	0.100	0.0942		mg/L		94	80 - 120
Cadmium	0.0500	0.0514		mg/L		103	80 - 120
Calcium	5.00	5.05		mg/L		101	80 - 120
Chromium	0.0500	0.0512		mg/L		102	80 - 120
Cobalt	0.0500	0.0500		mg/L		100	80 - 120
Lead	0.0500	0.0492		mg/L		98	80 - 120
Lithium	0.0500	0.0497		mg/L		99	80 - 120
Molybdenum	0.0500	0.0503		mg/L		101	80 - 120
Selenium	0.0500	0.0500		mg/L		100	80 - 120
Thallium	0.0100	0.0104		mg/L		104	80 - 120

**Lab Sample ID: 400-127231-3 MS**  
**Matrix: Water**  
**Analysis Batch: 325417**

**Client Sample ID: WGWC-15**  
**Prep Type: Total Recoverable**  
**Prep Batch: 324311**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0527		mg/L		105	75 - 125
Arsenic	0.0024		0.0500	0.0562		mg/L		108	75 - 125
Barium	0.020		0.0500	0.0682		mg/L		96	75 - 125
Beryllium	<0.00034		0.0500	0.0450		mg/L		90	75 - 125
Boron	<0.021		0.100	0.110		mg/L		110	75 - 125
Cadmium	<0.00034		0.0500	0.0500		mg/L		100	75 - 125
Calcium	37		5.00	39.7	4	mg/L		60	75 - 125
Chromium	<0.0011		0.0500	0.0502		mg/L		100	75 - 125
Cobalt	<0.00040		0.0500	0.0510		mg/L		102	75 - 125
Lead	<0.00035	L	0.0500	0.0463		mg/L		93	75 - 125
Lithium	<0.0032		0.0500	0.0562		mg/L		112	75 - 125
Molybdenum	0.012	J	0.0500	0.0630		mg/L		101	75 - 125
Selenium	<0.00024		0.0500	0.0512		mg/L		102	75 - 125
Thallium	<0.000085		0.0100	0.0103		mg/L		103	75 - 125

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Lab Sample ID: 400-127231-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 325417**

**Client Sample ID: WGWC-15**  
**Prep Type: Total Recoverable**  
**Prep Batch: 324311**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Antimony	<0.0010		0.0500	0.0524		mg/L		105	75 - 125	1	20
Arsenic	0.0024		0.0500	0.0555		mg/L		106	75 - 125	1	20
Barium	0.020		0.0500	0.0687		mg/L		97	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0462		mg/L		92	75 - 125	3	20
Boron	<0.021		0.100	0.109		mg/L		109	75 - 125	1	20
Cadmium	<0.00034		0.0500	0.0514		mg/L		103	75 - 125	3	20
Calcium	37		5.00	40.4	4	mg/L		75	75 - 125	2	20
Chromium	<0.0011		0.0500	0.0513		mg/L		103	75 - 125	2	20
Cobalt	<0.00040		0.0500	0.0509		mg/L		102	75 - 125	0	20
Lead	<0.00035	L	0.0500	0.0465		mg/L		93	75 - 125	0	20
Lithium	<0.0032		0.0500	0.0563		mg/L		113	75 - 125	0	20
Molybdenum	0.012	J	0.0500	0.0633		mg/L		102	75 - 125	1	20
Selenium	<0.00024		0.0500	0.0505		mg/L		101	75 - 125	1	20
Thallium	<0.000085		0.0100	0.0103		mg/L		103	75 - 125	0	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 400-325126/14-A**  
**Matrix: Water**  
**Analysis Batch: 325332**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 325126**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000070		0.00020	0.000070	mg/L		10/03/16 13:47	10/04/16 14:18	1

**Lab Sample ID: LCS 400-325126/15-A**  
**Matrix: Water**  
**Analysis Batch: 325332**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 325126**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00112		mg/L		111	80 - 120

**Lab Sample ID: 400-127231-2 MS**  
**Matrix: Water**  
**Analysis Batch: 325332**

**Client Sample ID: WGWA-5**  
**Prep Type: Total/NA**  
**Prep Batch: 325126**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Mercury	<0.000070		0.00201	0.00223		mg/L		111	80 - 120		

**Lab Sample ID: 400-127231-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 325332**

**Client Sample ID: WGWA-5**  
**Prep Type: Total/NA**  
**Prep Batch: 325126**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Mercury	<0.000070		0.00201	0.00219		mg/L		109	80 - 120	2	20

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

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

**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-A-2 DU**  
**Matrix: Water**  
**Analysis Batch: 323428**

**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	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

**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: 400-127231-2 DU**  
**Matrix: Water**  
**Analysis Batch: 323631**

**Client Sample ID: WGWA-5**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	150		152		mg/L		0	5

**Lab Sample ID: MB 400-323633/1**  
**Matrix: Water**  
**Analysis Batch: 323633**

**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 18:24	1

**Lab Sample ID: LCS 400-323633/2**  
**Matrix: Water**  
**Analysis Batch: 323633**

**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	292		mg/L		100	78 - 122

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

**Lab Sample ID: 400-127231-3 DU**  
**Matrix: Water**  
**Analysis Batch: 323633**

**Client Sample ID: WGWC-15**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	230		228		mg/L		0	5

**Lab Sample ID: 400-127231-14 DU**  
**Matrix: Water**  
**Analysis Batch: 323633**

**Client Sample ID: WGWC-10**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	40		40.0		mg/L		0	5

**Lab Sample ID: MB 400-323794/1**  
**Matrix: Water**  
**Analysis Batch: 323794**

**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			09/22/16 18:31	1

**Lab Sample ID: LCS 400-323794/2**  
**Matrix: Water**  
**Analysis Batch: 323794**

**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	282		mg/L		96	78 - 122

**Lab Sample ID: 400-127231-15 DU**  
**Matrix: Water**  
**Analysis Batch: 323794**

**Client Sample ID: WGWC-8**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	270		262		mg/L		2	5

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

Chain of Custody Record

TestAmerica  
 THE LEADER IN ENVIRONMENTAL TESTING

Knsten Jvinko, Ben Hodges, Chris Garrison, Travis Mar 11 10 10

Client Information  
 Client Contact: Jojul Abraham  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State: GA  
 Zip: 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: CCR- Plant Wansley  
 Site: Wansley AP CCR GW

Sampler: GOLDER ASSOCIATES  
 Lab PM: Whitmore, Cheyenne R  
 E-Mail: cheyenne.whitmore@testamerica.com  
 Phone: 770-496-1893  
 Due Date Requested:  
 TAT Requested (days):  
 PO #:  
 WO #:  
 Project #: 40007041  
 SSW#:   
 Carrier Tracking No(s):

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, BT= tissue, A=air)	Field Filtered Sample (Yes or No)	Performance MS/MSD (Yes or No)	9315, Ra226, 9320, Ra228, Rad226Ra228, GPPC	6020-Sb, As, Ba, Be, Bi, Cd, Cr, Co, Pb, Li, Mn, Se, Tl, 7470A-Hg	2540-TDS, 300_ORGM, 28D-Chloride, Fluoride, Sulfate	Total Number of Containers	Special Instructions/Note:
ED-1 (AP)	9/14/16	0850	G	Water						4	* send report copy to CHMCCORX@southernco.com
NGWA-5	9/14/16	6839		Water						2	MR-PADILL@southernco.com
NGWC-15	9/14/16	1027		Water						3	* W GWA-5 purged dry-low recharge
NGWC-16	9/14/16	1030		Water						3	
NGWC-11	9/14/16	1058		Water						3	
NGWC-13	9/14/16	1235		Water						3	
NGWC-14	9/14/16	1350		Water						3	
NGWC-12	9/14/16	1250		Water						3	
NGWC-9	9/14/16	1247		Water						3	
FB-2 (AP)	9/14/16	1300		Water						3	400-127231 COC

Analysis Requested  
 Preservation Codes:  
 A-HCL, B-NaOH, C-Zn Acetate, D-Nitric Acid, E-NaHSO4, F-MeOH, G-Anchlor, H-Ascorbic Acid, I-Ice, J-DI Water, K-EDTA, L-EDA, M-Hexane, N-None, O-AsNaO2, P-Na2O4S, Q-Na2SO3, R-Na2S2O3, S-H2SO4, T-TSP Dodecahydrate, U-Acetone, V-MCAA, W-ph 4-5, Z-other (specify)  
 Other:  
 Special Instructions/Note:  
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months  
 Special Instructions/QC Requirements: MR-PADILL@southernco.com  
 SEND REPORT COPY TO CHMCCORX@southernco.com +

Possible Hazard Identification  
 Non-Hazard  Flammable  Skin Irritant  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by:  
 Relinquished by: [Signature]  
 Date: 9/14/16 1730  
 Company: Golder  
 Relinquished by:  
 Date/Time:  
 Company:

Custody Seals Intact:  
 Yes  No  
 Custody Seal No.:  
 Cooler Temperature(s) °C and Other Remarks: 0.8°C, 3.7°C, 0.9°C, 2.1°C IR6

Page 45 of 49  
 10/19/2016



**Chain of Custody Record**

7 Kristin Jurinko, Ben Hodges, Chris Gargan, Travis M. Hartz

Carrier Tracking No(s):

Lab PVI: Whitnire, Cheyenne R  
 E-Mail: cheyenne.whitnire@testamericainc.com

Company: Southern Company  
 Address: 2411 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State: GA, Zip: 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: CCR- Plant Wansley  
 Site: Wansley AP CCRGW

Sampler: GOLDER ASSOCIATES  
 Phone: 770-496-1893

Due Date Requested:  
 TAT Requested (days):  
 PO #:  
 WO #:  
 Project #: 40007041  
 SOW#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Blood, AS=Air)	Field Filtered Sample (Yes or No)	Performance (Yes or No)	6020-Sb,As,Ba,Bi,Cd,Cr,Cu,Pb,LI,Mo,Se,Tl,7470A-Hg	2540C-TDS,300_ORGM,28D-Chloride,Fluoride,Sulfate	Analysis Requested	Preservation Codes	Special Instructions/Note
FB-2 (AP)	9/14/16	1315	G	Water						M - Hexane N - None O - Ash/NaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 X - EDTA Y - EDA Z - other (specify)	
WGWA-4	9/13/16	1517	G	Water							
WGWG-12	9/14/16	1250	G	Water							
WGWG-10	9/14/16	1510	G	Water							

Return To Client  Archive For \_\_\_\_\_ Months  
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Special Instructions/QC Requirements: MRPADILL @ Southern CO : COM  
 SEND REPORT LOG TO CHMCCORR@SOUTHERNCO.COM

Received by: [Signature] Date: 9/14/16 1730  
 Company: Goldex  
 Received by: [Signature] Date: 9/15/16 922  
 Company: TIA  
 Received by: [Signature] Date: [ ]  
 Company: [ ]

Empty Kit Relinquished by: [Signature] Date: [ ]  
 Relinquished by: [Signature] Date: [ ]  
 Relinquished by: [Signature] Date: [ ]

Custody Seals Intact:  Yes  No  
 Cooler Temperature(s) °C and Other Remarks: 0.8°C, 0.9°C, 2.1°C, 3.7°C IR6





## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-127231-1  
SDG Number: Wansley AP CCR GW

**Login Number: 127231**

**List Number: 1**

**Creator: Hughes, Nicholas T**

**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.	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	0.8°C, 0.9°C, 2.1°C, 3.7°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 <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 Wansley

TestAmerica Job ID: 400-127231-1  
SDG: Wansley AP CCR GW

## Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
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: 400-127231-2

TestAmerica Sample Delivery Group: Wansley AP CCR GW

Client Project/Site: CCR Plant Wansley

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

10/19/2016 5:11:05 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

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

### LINKS

Review your project  
results through

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Have a Question?



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

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

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

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

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# Method Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

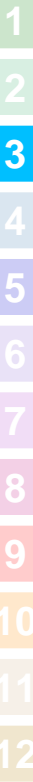
Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

**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 Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-127231-1	EB-1 (AP)	Water	09/14/16 08:50	09/15/16 09:22
400-127231-3	WGWC-15	Water	09/14/16 10:27	09/15/16 09:22
400-127231-4	WGWC-16	Water	09/14/16 10:30	09/15/16 09:22
400-127231-5	WGWC-11	Water	09/14/16 10:30	09/15/16 09:22
400-127231-6	WGWC-17	Water	09/14/16 10:58	09/15/16 09:22
400-127231-7	WGWC-13	Water	09/14/16 12:35	09/15/16 09:22
400-127231-8	WGWC-14	Water	09/14/16 12:50	09/15/16 09:22
400-127231-9	WGWC-9	Water	09/14/16 12:47	09/15/16 09:22
400-127231-10	FB-2 (AP)	Water	09/14/16 13:00	09/15/16 09:22
400-127231-11	EB-2 (AP)	Water	09/14/16 13:15	09/15/16 09:22
400-127231-12	WGWA-4	Water	09/13/16 15:17	09/15/16 09:22
400-127231-13	WGWC-12	Water	09/14/16 12:50	09/15/16 09:22
400-127231-14	WGWC-10	Water	09/14/16 15:10	09/15/16 09:22
400-127231-15	WGWC-8	Water	09/15/16 09:45	09/16/16 08:19



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

**Client Sample ID: EB-1 (AP)**

**Lab Sample ID: 400-127231-1**

**Date Collected: 09/14/16 08:50**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0404	U	0.0534	0.0535	1.00	0.0893	pCi/L	09/22/16 17:15	10/14/16 15:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.8		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	-0.0323	U	0.277	0.277	1.00	0.506	pCi/L	09/22/16 17:48	10/08/16 16:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.8		40 - 110					09/22/16 17:48	10/08/16 16:27	1
Y Carrier	75.1		40 - 110					09/22/16 17:48	10/08/16 16:27	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.00816	U	0.282	0.282	5.00	0.506	pCi/L		10/17/16 01:02	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-2  
 SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-127231-3**

Date Collected: 09/14/16 10:27

Matrix: Water

Date Received: 09/15/16 09:22

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.167		0.0697	0.0713	1.00	0.0796	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	0.244	U	0.348	0.349	1.00	0.582	pCi/L	09/22/16 17:48	10/08/16 16:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					09/22/16 17:48	10/08/16 16:27	1
Y Carrier	73.3		40 - 110					09/22/16 17:48	10/08/16 16:27	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.412	U	0.355	0.356	5.00	0.582	pCi/L		10/17/16 01:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-127231-4**

Date Collected: 09/14/16 10:30

Matrix: Water

Date Received: 09/15/16 09:22

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.894		0.138	0.160	1.00	0.0776	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	2.16		0.421	0.466	1.00	0.434	pCi/L	09/22/16 17:48	10/08/16 16:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					09/22/16 17:48	10/08/16 16:27	1
Y Carrier	80.7		40 - 110					09/22/16 17:48	10/08/16 16:27	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.05		0.443	0.492	5.00	0.434	pCi/L		10/17/16 01:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-127231-5**

**Date Collected: 09/14/16 10:30**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0512	U	0.0503	0.0505	1.00	0.0795	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	0.0790	U	0.353	0.353	1.00	0.611	pCi/L	09/22/16 17:48	10/08/16 16:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.2		40 - 110					09/22/16 17:48	10/08/16 16:27	1
Y Carrier	84.1		40 - 110					09/22/16 17:48	10/08/16 16:27	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.130	U	0.356	0.357	5.00	0.611	pCi/L		10/17/16 01:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-127231-6**

**Date Collected: 09/14/16 10:58**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0699	U	0.0761	0.0764	1.00	0.124	pCi/L	09/22/16 17:15	10/14/16 15:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110					09/22/16 17:15	10/14/16 15:15	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.524	U	0.345	0.348	1.00	0.533	pCi/L	09/22/16 17:48	10/08/16 16:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110					09/22/16 17:48	10/08/16 16:28	1
Y Carrier	77.8		40 - 110					09/22/16 17:48	10/08/16 16:28	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	0.594		0.353	0.356	5.00	0.533	pCi/L		10/17/16 01:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-127231-7**

Date Collected: 09/14/16 12:35

Matrix: Water

Date Received: 09/15/16 09:22

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.297		0.0847	0.0888	1.00	0.0724	pCi/L	09/22/16 17:15	10/14/16 15:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					09/22/16 17:15	10/14/16 15:15	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.395	U	0.289	0.292	1.00	0.450	pCi/L	09/22/16 17:48	10/08/16 16:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					09/22/16 17:48	10/08/16 16:30	1
Y Carrier	78.1		40 - 110					09/22/16 17:48	10/08/16 16:30	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.692		0.301	0.305	5.00	0.450	pCi/L		10/17/16 01:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-14**

**Lab Sample ID: 400-127231-8**

Date Collected: 09/14/16 12:50

Matrix: Water

Date Received: 09/15/16 09:22

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.475		0.0980	0.107	1.00	0.0693	pCi/L	09/22/16 20:18	10/14/16 16:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.3		40 - 110					09/22/16 20:18	10/14/16 16:02	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.297	U	0.243	0.245	1.00	0.384	pCi/L	09/22/16 20:40	10/06/16 18:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.3		40 - 110					09/22/16 20:40	10/06/16 18:13	1
Y Carrier	87.9		40 - 110					09/22/16 20:40	10/06/16 18:13	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.772		0.262	0.267	5.00	0.384	pCi/L		10/17/16 01:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-127231-9**

**Date Collected: 09/14/16 12:47**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0819	U	0.0669	0.0673	1.00	0.103	pCi/L	09/22/16 20:18	10/14/16 16:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.8		40 - 110					09/22/16 20:18	10/14/16 16:13	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.338	U	0.275	0.277	1.00	0.435	pCi/L	09/22/16 20:40	10/06/16 18:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.8		40 - 110					09/22/16 20:40	10/06/16 18:13	1
Y Carrier	84.9		40 - 110					09/22/16 20:40	10/06/16 18:13	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.420	U	0.283	0.285	5.00	0.435	pCi/L		10/17/16 01:02	1



# Client Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-2  
 SDG: Wansley AP CCR GW

**Client Sample ID: FB-2 (AP)**

**Lab Sample ID: 400-127231-10**

**Date Collected: 09/14/16 13:00**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0289	U	0.0420	0.0421	1.00	0.0922	pCi/L	09/22/16 20:18	10/14/16 18:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					09/22/16 20:18	10/14/16 18:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0677	U	0.245	0.245	1.00	0.428	pCi/L	09/22/16 20:40	10/06/16 18:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					09/22/16 20:40	10/06/16 18:13	1
Y Carrier	87.9		40 - 110					09/22/16 20:40	10/06/16 18:13	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0388	U	0.249	0.249	5.00	0.428	pCi/L		10/17/16 01:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

**Client Sample ID: EB-2 (AP)**

**Lab Sample ID: 400-127231-11**

**Date Collected: 09/14/16 13:15**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0771		0.0518	0.0523	1.00	0.0725	pCi/L	09/22/16 20:18	10/14/16 18:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.6		40 - 110					09/22/16 20:18	10/14/16 18:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.168	U	0.247	0.247	1.00	0.414	pCi/L	09/22/16 20:40	10/06/16 18:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.6		40 - 110					09/22/16 20:40	10/06/16 18:13	1
Y Carrier	89.7		40 - 110					09/22/16 20:40	10/06/16 18:13	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.245	U	0.252	0.253	5.00	0.414	pCi/L		10/17/16 01:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-127231-12**

Date Collected: 09/13/16 15:17

Matrix: Water

Date Received: 09/15/16 09:22

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.523		0.104	0.114	1.00	0.0798	pCi/L	09/22/16 20:18	10/14/16 18:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					09/22/16 20:18	10/14/16 18:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.435		0.268	0.271	1.00	0.409	pCi/L	09/22/16 20:40	10/06/16 18:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					09/22/16 20:40	10/06/16 18:13	1
Y Carrier	90.8		40 - 110					09/22/16 20:40	10/06/16 18:13	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.958		0.287	0.294	5.00	0.409	pCi/L		10/17/16 01:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-127231-13**

**Date Collected: 09/14/16 12:50**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0384	U	0.0608	0.0609	1.00	0.104	pCi/L	09/22/16 20:18	10/14/16 18:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.2		40 - 110					09/22/16 20:18	10/14/16 18:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.160	U	0.240	0.240	1.00	0.402	pCi/L	09/22/16 20:40	10/06/16 18:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.2		40 - 110					09/22/16 20:40	10/06/16 18:13	1
Y Carrier	89.7		40 - 110					09/22/16 20:40	10/06/16 18:13	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.199	U	0.247	0.248	5.00	0.402	pCi/L		10/17/16 01:02	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-2  
 SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-127231-14**

**Date Collected: 09/14/16 15:10**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.109		0.0695	0.0702	1.00	0.0977	pCi/L	09/22/16 20:18	10/14/16 18:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	63.5		40 - 110					09/22/16 20:18	10/14/16 18:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.202	U	0.439	0.439	1.00	0.746	pCi/L	09/22/16 20:40	10/06/16 18:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	63.5		40 - 110					09/22/16 20:40	10/06/16 18:13	1
Y Carrier	84.1		40 - 110					09/22/16 20:40	10/06/16 18:13	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.311	U	0.444	0.445	5.00	0.746	pCi/L		10/17/16 01:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-127231-15**

**Date Collected: 09/15/16 09:45**

**Matrix: Water**

**Date Received: 09/16/16 08:19**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.381		0.0916	0.0978	1.00	0.0781	pCi/L	09/22/16 20:18	10/14/16 18:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110					09/22/16 20:18	10/14/16 18:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.881		0.315	0.325	1.00	0.431	pCi/L	09/22/16 20:40	10/06/16 18:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110					09/22/16 20:40	10/06/16 18:13	1
Y Carrier	89.3		40 - 110					09/22/16 20:40	10/06/16 18:13	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.26		0.328	0.339	5.00	0.431	pCi/L		10/17/16 01:02	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

## 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.
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 Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

**Client Sample ID: EB-1 (AP)**

**Date Collected: 09/14/16 08:50**

**Date Received: 09/15/16 09:22**

**Lab Sample ID: 400-127231-1**

**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 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 16:27	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274685	10/17/16 01:02	ALS	TAL SL

**Client Sample ID: WGWC-15**

**Date Collected: 09/14/16 10:27**

**Date Received: 09/15/16 09:22**

**Lab Sample ID: 400-127231-3**

**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 15:14	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 16:27	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274685	10/17/16 01:02	ALS	TAL SL

**Client Sample ID: WGWC-16**

**Date Collected: 09/14/16 10:30**

**Date Received: 09/15/16 09:22**

**Lab Sample ID: 400-127231-4**

**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 15:14	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 16:27	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274685	10/17/16 01:02	ALS	TAL SL

**Client Sample ID: WGWC-11**

**Date Collected: 09/14/16 10:30**

**Date Received: 09/15/16 09:22**

**Lab Sample ID: 400-127231-5**

**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 15:14	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 16:27	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 Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-127231-6**

**Date Collected: 09/14/16 10:58**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

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	274546	10/14/16 15:15	RTM	TAL SL
Total/NA	Prep	PrecSep_0			271215	09/22/16 17:48	MCJ	TAL SL
Total/NA	Analysis	9320		1	273668	10/08/16 16:28	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274685	10/17/16 01:02	ALS	TAL SL

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-127231-7**

**Date Collected: 09/14/16 12:35**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

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	274546	10/14/16 15:15	RTM	TAL SL
Total/NA	Prep	PrecSep_0			271215	09/22/16 17:48	MCJ	TAL SL
Total/NA	Analysis	9320		1	273668	10/08/16 16:30	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274685	10/17/16 01:02	ALS	TAL SL

**Client Sample ID: WGWC-14**

**Lab Sample ID: 400-127231-8**

**Date Collected: 09/14/16 12:50**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			271217	09/22/16 20:18	MCJ	TAL SL
Total/NA	Analysis	9315		1	274548	10/14/16 16:02	RTM	TAL SL
Total/NA	Prep	PrecSep_0			271219	09/22/16 20:40	MCJ	TAL SL
Total/NA	Analysis	9320		1	273463	10/06/16 18:13	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274685	10/17/16 01:02	ALS	TAL SL

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-127231-9**

**Date Collected: 09/14/16 12:47**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			271217	09/22/16 20:18	MCJ	TAL SL
Total/NA	Analysis	9315		1	274543	10/14/16 16:13	RTM	TAL SL
Total/NA	Prep	PrecSep_0			271219	09/22/16 20:40	MCJ	TAL SL
Total/NA	Analysis	9320		1	273463	10/06/16 18:13	RTM	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 Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

**Client Sample ID: FB-2 (AP)**

**Lab Sample ID: 400-127231-10**

**Date Collected: 09/14/16 13:00**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			271217	09/22/16 20:18	MCJ	TAL SL
Total/NA	Analysis	9315		1	274548	10/14/16 18:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			271219	09/22/16 20:40	MCJ	TAL SL
Total/NA	Analysis	9320		1	273463	10/06/16 18:13	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274685	10/17/16 01:02	ALS	TAL SL

**Client Sample ID: EB-2 (AP)**

**Lab Sample ID: 400-127231-11**

**Date Collected: 09/14/16 13:15**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			271217	09/22/16 20:18	MCJ	TAL SL
Total/NA	Analysis	9315		1	274548	10/14/16 18:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			271219	09/22/16 20:40	MCJ	TAL SL
Total/NA	Analysis	9320		1	273463	10/06/16 18:13	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274685	10/17/16 01:02	ALS	TAL SL

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-127231-12**

**Date Collected: 09/13/16 15:17**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			271217	09/22/16 20:18	MCJ	TAL SL
Total/NA	Analysis	9315		1	274548	10/14/16 18:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			271219	09/22/16 20:40	MCJ	TAL SL
Total/NA	Analysis	9320		1	273463	10/06/16 18:13	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274685	10/17/16 01:02	ALS	TAL SL

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-127231-13**

**Date Collected: 09/14/16 12:50**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			271217	09/22/16 20:18	MCJ	TAL SL
Total/NA	Analysis	9315		1	274548	10/14/16 18:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			271219	09/22/16 20:40	MCJ	TAL SL
Total/NA	Analysis	9320		1	273463	10/06/16 18:13	RTM	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 Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-127231-14**

**Date Collected: 09/14/16 15:10**

**Matrix: Water**

**Date Received: 09/15/16 09:22**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			271217	09/22/16 20:18	MCJ	TAL SL
Total/NA	Analysis	9315		1	274548	10/14/16 18:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			271219	09/22/16 20:40	MCJ	TAL SL
Total/NA	Analysis	9320		1	273463	10/06/16 18:13	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	274685	10/17/16 01:02	ALS	TAL SL

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-127231-15**

**Date Collected: 09/15/16 09:45**

**Matrix: Water**

**Date Received: 09/16/16 08:19**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			271217	09/22/16 20:18	MCJ	TAL SL
Total/NA	Analysis	9315		1	274548	10/14/16 18:49	RTM	TAL SL
Total/NA	Prep	PrecSep_0			271219	09/22/16 20:40	MCJ	TAL SL
Total/NA	Analysis	9320		1	273463	10/06/16 18:13	RTM	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 Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

## Rad

### Prep Batch: 271213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127231-1	EB-1 (AP)	Total/NA	Water	PrecSep-21	
400-127231-3	WGWC-15	Total/NA	Water	PrecSep-21	
400-127231-4	WGWC-16	Total/NA	Water	PrecSep-21	
400-127231-5	WGWC-11	Total/NA	Water	PrecSep-21	
400-127231-6	WGWC-17	Total/NA	Water	PrecSep-21	
400-127231-7	WGWC-13	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
400-127231-1	EB-1 (AP)	Total/NA	Water	PrecSep_0	
400-127231-3	WGWC-15	Total/NA	Water	PrecSep_0	
400-127231-4	WGWC-16	Total/NA	Water	PrecSep_0	
400-127231-5	WGWC-11	Total/NA	Water	PrecSep_0	
400-127231-6	WGWC-17	Total/NA	Water	PrecSep_0	
400-127231-7	WGWC-13	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	

### Prep Batch: 271217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127231-8	WGWC-14	Total/NA	Water	PrecSep-21	
400-127231-9	WGWC-9	Total/NA	Water	PrecSep-21	
400-127231-10	FB-2 (AP)	Total/NA	Water	PrecSep-21	
400-127231-11	EB-2 (AP)	Total/NA	Water	PrecSep-21	
400-127231-12	WGWA-4	Total/NA	Water	PrecSep-21	
400-127231-13	WGWC-12	Total/NA	Water	PrecSep-21	
400-127231-14	WGWC-10	Total/NA	Water	PrecSep-21	
400-127231-15	WGWC-8	Total/NA	Water	PrecSep-21	
MB 160-271217/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-271217/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
490-111707-A-5-A MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep-21	
490-111707-B-5-B MS	Matrix Spike	Total/NA	Water	PrecSep-21	

### Prep Batch: 271219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127231-8	WGWC-14	Total/NA	Water	PrecSep_0	
400-127231-9	WGWC-9	Total/NA	Water	PrecSep_0	
400-127231-10	FB-2 (AP)	Total/NA	Water	PrecSep_0	
400-127231-11	EB-2 (AP)	Total/NA	Water	PrecSep_0	
400-127231-12	WGWA-4	Total/NA	Water	PrecSep_0	
400-127231-13	WGWC-12	Total/NA	Water	PrecSep_0	
400-127231-14	WGWC-10	Total/NA	Water	PrecSep_0	
400-127231-15	WGWC-8	Total/NA	Water	PrecSep_0	
MB 160-271219/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-271219/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
490-111707-A-5-B MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep_0	
490-111707-B-5-D MS	Matrix Spike	Total/NA	Water	PrecSep_0	

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

## 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 Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
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 %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
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 Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.1	15.08		1.48	1.00	0.111	pCi/L	136	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	74.9	X	40 - 110						

**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 Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.1	14.74		1.44	1.00	0.0807	pCi/L	133	68 - 137	0.11	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	80.9	X	40 - 110								

**Lab Sample ID: MB 160-271217/1-A**  
**Matrix: Water**  
**Analysis Batch: 274543**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 271217**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0000	U	0.0442	0.0442	1.00	0.0883	pCi/L	09/22/16 20:18	10/14/16 15:58	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.9	X	40 - 110					09/22/16 20:18	10/14/16 15:58	1

**Lab Sample ID: LCS 160-271217/2-A**  
**Matrix: Water**  
**Analysis Batch: 274546**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 271217**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.1	14.21		1.38	1.00	0.0807	pCi/L	128	68 - 137

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

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

**Lab Sample ID: LCS 160-271217/2-A**  
**Matrix: Water**  
**Analysis Batch: 274546**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 271217**

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	78.3		40 - 110

**Lab Sample ID: 490-111707-A-5-A MSD**  
**Matrix: Water**  
**Analysis Batch: 274548**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 271217**

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	0.202		11.1	11.91		1.15	1.00	0.0680	pCi/L	105	75 - 138	0.44	1

	MSD	MSD	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	92.3		40 - 110

**Lab Sample ID: 490-111707-B-5-B MS**  
**Matrix: Water**  
**Analysis Batch: 274548**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 271217**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	0.202		11.1	12.96		1.26	1.00	0.0650	pCi/L	115	75 - 138

	MS	MS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	94.0		40 - 110

## 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 Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
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

	MB	MB	Limits	Prepared	Analyzed	Dil Fac
Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	9.97	X	40 - 110	09/22/16 17:48	10/08/16 16:23	1
Y Carrier	77.8		40 - 110	09/22/16 17:48	10/08/16 16:23	1

**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

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

## 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**

Carrier	LCS %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	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	80.9		40 - 110
Y Carrier	78.5		40 - 110

**Lab Sample ID: MB 160-271219/1-A**  
**Matrix: Water**  
**Analysis Batch: 273463**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 271219**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.5544		0.333	0.337	1.00	0.507	pCi/L	09/22/16 20:40	10/06/16 18:12	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	74.9		40 - 110	09/22/16 20:40	10/06/16 18:12	1
Y Carrier	84.5		40 - 110	09/22/16 20:40	10/06/16 18:12	1

**Lab Sample ID: LCS 160-271219/2-A**  
**Matrix: Water**  
**Analysis Batch: 273463**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 271219**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.5	15.78		1.73	1.00	0.429	pCi/L	109	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	78.3		40 - 110
Y Carrier	86.4		40 - 110

**Lab Sample ID: 490-111707-A-5-B MSD**  
**Matrix: Water**  
**Analysis Batch: 273497**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 271219**

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	0.204	U	14.5	16.65		1.78	1.00	0.419	pCi/L	115	45 - 150	0.19	1

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-127231-2  
 SDG: Wansley AP CCR GW

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

**Lab Sample ID: 490-111707-A-5-B MSD**  
**Matrix: Water**  
**Analysis Batch: 273497**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 271219**

	<i>MSD</i>	<i>MSD</i>	
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Ba Carrier</i>	92.3		40 - 110
<i>Y Carrier</i>	82.2		40 - 110

**Lab Sample ID: 490-111707-B-5-D MS**  
**Matrix: Water**  
**Analysis Batch: 273463**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 271219**

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qual</i>	<i>Spike Added</i>	<i>MS Result</i>	<i>MS Qual</i>	<i>Total Uncert. (2σ+/-)</i>	<i>RL</i>	<i>MDC</i>	<i>Unit</i>	<i>%Rec</i>	<i>%Rec. Limits</i>
											45 - 150
Radium-228	0.204	U	14.5	15.98		1.72	1.00	0.396	pCi/L	111	

	<i>MS</i>	<i>MS</i>	
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Ba Carrier</i>	94.0		40 - 110
<i>Y Carrier</i>	81.5		40 - 110



TestAmerica Pensacola  
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Chain of Custody Record

TestAmerica  
 THE LEADER IN ENVIRONMENTAL TESTING

Knsten Jvinko, Ben Hodges, Chris Garrison, Travis Mar 11 10 11

Client Information  
 Client Contact: Jojul Abraham  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State: GA, Zip: 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: CCR- Plant Wansley  
 Site: Wansley AP CCR GW

Sampler: GOLDER ASSOCIATES  
 Lab PM: Whitmore, Cheyenne R  
 Phone: 770-496-1893  
 E-Mail: cheyenne.whitmore@testamerica.com

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=oil, BT=BIOSAMPLE)	Field Filtered Sample (Yes or No)	Performance MS/MSD (Yes or No)	9315, Ra226, 9320, Ra228, Rad226Ra228, GPPC	6020-Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Mn, Se, Tl, 7470A-Hg	2540-TDS, 300_ORGM, 28D-Chloride, Fluoride, Sulfate	Total Number of Containers	Special Instructions/Note:
ED-1 (AP)	9/14/16	0850	G	Water						4	* Send report copy to CHMCCORX@southernco.com
NGWA-5	9/14/16	6839		Water						2	
NGWC-15	9/14/16	1027		Water						3	MR.PADILL@SOUTHERNCO.COM
NGWC-16	9/14/16	1030		Water						3	
NGWC-11	9/14/16	1058		Water						3	* W GWA-5 purged dry-low recharge
NGWC-13	9/14/16	1235		Water						3	
NGWC-14	9/14/16	1350		Water						3	
NGWC-12	9/14/16	1250		Water						3	
NGWC-9	9/14/16	1247		Water						3	
FB-2 (AP)	9/14/16	1300		Water						3	400-127231 COC

Analysis Requested  
 Due Date Requested:  
 TAT Requested (days):  
 PO #:  
 WO #:  
 Project #: 40007041  
 SSW#:   
 Preservation Codes:  
 A-HCL, B-NaOH, C-Zn Acetate, D-Nitric Acid, E-NaHSO4, F-MeOH, G-Anchlor, H-Ascorbic Acid, I-Ice, J-DI Water, K-EDTA, L-EDA, 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, Z-other (specify)

Possible Hazard Identification  
 Non-Hazard  Flammable  Skin Irritant  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months  
 Special Instructions/QC Requirements: MR.PADILL@SOUTHERNCO.COM  
 SEND REPORT COPY TO CHMCCORX@southernco.com +

Empty Kit Relinquished by:  
 Relinquished by: [Signature]  
 Relinquished by: [Signature]  
 Relinquished by: [Signature]



Date/Time: 9/14/16 1730  
 Date/Time: 9/15/16 922  
 Date/Time: [Blank]  
 Date/Time: [Blank]

Company: Golder  
 Company: TA  
 Company: [Blank]  
 Company: [Blank]

Custody Seals Intact: [Blank]  
 Custody Seal No.: [Blank]  
 Cooler Temperature(s) °C and Other Remarks: 0.8°C, 3.7°C, 0.9°C, 2.1°C IR6

**Chain of Custody Record**

7 Kristin Jurinko, Ben Hodges, Chris Gargan, Travis McArthur

<b>Client Information</b> Client Contact: Jôju Abraham Company: Southern Company Address: 2411 Ralph McGill Blvd SE B10185 City: Atlanta State: GA, Zip: 30308 Phone: 404-506-7239 Email: JAbraham@southernco.com Project Name: CCR- Plant Wansley Site: Wansley AP (CRGW)		<b>Sampler:</b> GOLDER ASSOCIATES Lab PVI: Whitnirre, Cheyenne R E-Mail: cheyenne.whitnirre@testamericainc.com Phone: 770-496-1893		<b>Carrier Tracking ID(s):</b> Page: 2 of 2 Job #:	
<b>Due Date Requested:</b> TAT Requested (days): PO #: WO #: Project #: 40007041 SOW#:		<b>Analysis Requested</b> 6020-Sb,As,Ba,Bi,Cr,Cd,Cu,Pb,LI,Mo,Se,Tl,7470A-Hg 2540C-TDS,300_ORGM,28D-Chloride,Fluoride,Sulfate Performance/MSP (Yes or No) Field Filtered Sample (Yes or No)			
<b>Sample Identification</b> Sample Date Sample Time Sample Type (C=Comp, G=grab) Matrix (W=water, S=solid, O=waste/oil, BT= tissue, A=air) Preservation Code:		Total Number of Containers Special Instructions/Note:			
FB-2 (AP) WGWA-4 WGWOC-12 WGWOC-10		9/14/16 1515 G 9/13/16 1517 G 9/14/16 1250 G 9/14/16 1510 G		3 3 4 3	
<b>Possible Hazard Identification</b> <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					
<b>Deliverable Requested:</b> I, II, III, IV, Other (specify)					
<b>Empty Kit Relinquished by:</b>					
Relinquished by:  Date/Time: 9/14/16 1730 Company: Goldex		Relinquished by:  Date/Time: 9/15/16 922 Company: TIA			
<b>Custody Seals Intact:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No					
Cooler Temperature(s) °C and Other Remarks: 0.8°C, 0.9°C, 2.1°C, 3.7°C IR6					





## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-127231-2

SDG Number: Wansley AP CCR GW

**Login Number: 127231**

**List Number: 1**

**Creator: Hughes, Nicholas T**

**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.	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	0.8°C, 0.9°C, 2.1°C, 3.7°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 <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 Wansley

TestAmerica Job ID: 400-127231-2  
 SDG: Wansley AP CCR GW

## Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
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 Wansley

TestAmerica Job ID: 400-127231-2  
SDG: Wansley AP CCR GW

## 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	06-30-17
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

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: 400-129975-1

TestAmerica Sample Delivery Group: AP

Client Project/Site: CCR Plant Wansley

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

12/1/2016 10:40:40 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

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

### LINKS

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

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

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

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

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# Case Narrative

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-1  
SDG: AP

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**Job ID: 400-129975-1**

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**Laboratory: TestAmerica Pensacola**

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**Narrative**

**Job Narrative**  
**400-129975-1**

**Metals**

Method(s) 6020: The interference check standard solution (ICSA) associated with batch 331889 had results for Chromium at a level greater than 2 times the reporting limit (RL). The associated samples are either Non-Detect (<RL) or >10x analyte result in ICSA (spiked samples), and have been qualified and reported.

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# Detection Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-1  
SDG: AP

## Client Sample ID: WGWA-2

## Lab Sample ID: 400-129975-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.3		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.085	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	1.1		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.025		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	19		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	0.0078		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	110		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-18

## Lab Sample ID: 400-129975-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.3		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	6.3		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.011		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	6.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0039		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	76		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-1

## Lab Sample ID: 400-129975-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.9		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.041		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.1		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	0.0032	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	22		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-6

## Lab Sample ID: 400-129975-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.5		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.10	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	8.2		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.0066		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	25		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0036	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	130		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Method Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-1  
SDG: AP

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN

#### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 Wansley

TestAmerica Job ID: 400-129975-1  
SDG: AP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-129975-1	WGWA-2	Water	11/09/16 11:10	11/11/16 09:53
400-129975-2	WGWA-18	Water	11/09/16 11:30	11/11/16 09:53
400-129975-3	WGWA-1	Water	11/09/16 12:40	11/11/16 09:53
400-129975-4	WGWA-6	Water	11/09/16 14:15	11/11/16 09:53

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# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-1  
SDG: AP

**Client Sample ID: WGWA-2**

**Lab Sample ID: 400-129975-1**

**Date Collected: 11/09/16 11:10**

**Matrix: Water**

**Date Received: 11/11/16 09:53**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.3		1.0	0.89	mg/L			11/30/16 05:32	1
Fluoride	0.085	J	0.20	0.082	mg/L			11/30/16 05:32	1
Sulfate	1.1		1.0	0.70	mg/L			11/30/16 05:32	1

### 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		11/14/16 12:00	11/17/16 19:45	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/14/16 12:00	11/17/16 19:45	5
Barium	0.025		0.0025	0.00049	mg/L		11/14/16 12:00	11/17/16 19:45	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/17/16 19:45	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/17/16 19:45	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/17/16 19:45	5
Calcium	19		0.25	0.13	mg/L		11/14/16 12:00	11/17/16 19:45	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/14/16 12:00	11/17/16 19:45	5
Cobalt	0.0011	J	0.0025	0.00040	mg/L		11/14/16 12:00	11/17/16 19:45	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/17/16 19:45	5
Lithium	0.0078		0.0050	0.0032	mg/L		11/14/16 12:00	11/17/16 19:45	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/14/16 12:00	11/17/16 19:45	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/17/16 19:45	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/17/16 19:45	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		11/14/16 10:57	11/18/16 13:24	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	110		5.0	3.4	mg/L			11/12/16 16:50	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-1  
SDG: AP

**Client Sample ID: WGWA-18**

**Lab Sample ID: 400-129975-2**

**Date Collected: 11/09/16 11:30**

**Matrix: Water**

**Date Received: 11/11/16 09:53**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>2.3</b>		1.0	0.89	mg/L			11/30/16 05:55	1
Fluoride	<0.082		0.20	0.082	mg/L			11/30/16 05:55	1
<b>Sulfate</b>	<b>6.3</b>		1.0	0.70	mg/L			11/30/16 05:55	1

### 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		11/14/16 12:00	11/17/16 19:49	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/14/16 12:00	11/17/16 19:49	5
<b>Barium</b>	<b>0.011</b>		0.0025	0.00049	mg/L		11/14/16 12:00	11/17/16 19:49	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/17/16 19:49	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/17/16 19:49	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/17/16 19:49	5
<b>Calcium</b>	<b>6.7</b>		0.25	0.13	mg/L		11/14/16 12:00	11/17/16 19:49	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/14/16 12:00	11/17/16 19:49	5
<b>Cobalt</b>	<b>0.0039</b>		0.0025	0.00040	mg/L		11/14/16 12:00	11/17/16 19:49	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/17/16 19:49	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/14/16 12:00	11/17/16 19:49	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/14/16 12:00	11/17/16 19:49	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/17/16 19:49	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/17/16 19:49	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		11/14/16 10:57	11/18/16 13:25	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>76</b>		5.0	3.4	mg/L			11/12/16 16:50	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-1  
SDG: AP

**Client Sample ID: WGWA-1**

**Lab Sample ID: 400-129975-3**

**Date Collected: 11/09/16 12:40**

**Matrix: Water**

**Date Received: 11/11/16 09:53**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.9</b>		1.0	0.89	mg/L			11/30/16 06:18	1
Fluoride	<0.082		0.20	0.082	mg/L			11/30/16 06:18	1
Sulfate	<0.70		1.0	0.70	mg/L			11/30/16 06:18	1

### 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		11/14/16 12:00	11/17/16 19:54	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/14/16 12:00	11/17/16 19:54	5
<b>Barium</b>	<b>0.041</b>		0.0025	0.00049	mg/L		11/14/16 12:00	11/17/16 19:54	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/17/16 19:54	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/17/16 19:54	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/17/16 19:54	5
<b>Calcium</b>	<b>1.1</b>		0.25	0.13	mg/L		11/14/16 12:00	11/17/16 19:54	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/14/16 12:00	11/17/16 19:54	5
<b>Cobalt</b>	<b>0.0012</b>	<b>J</b>	0.0025	0.00040	mg/L		11/14/16 12:00	11/17/16 19:54	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/17/16 19:54	5
<b>Lithium</b>	<b>0.0032</b>	<b>J</b>	0.0050	0.0032	mg/L		11/14/16 12:00	11/17/16 19:54	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/14/16 12:00	11/17/16 19:54	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/17/16 19:54	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/17/16 19:54	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		11/14/16 10:57	11/18/16 13:26	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>22</b>		5.0	3.4	mg/L			11/12/16 16:50	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-1  
SDG: AP

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-129975-4**

**Date Collected: 11/09/16 14:15**

**Matrix: Water**

**Date Received: 11/11/16 09:53**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.5		1.0	0.89	mg/L			11/30/16 07:26	1
Fluoride	0.10	J	0.20	0.082	mg/L			11/30/16 07:26	1
Sulfate	8.2		1.0	0.70	mg/L			11/30/16 07:26	1

### 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		11/14/16 12:00	11/18/16 19:10	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/14/16 12:00	11/18/16 19:10	5
Barium	0.0066		0.0025	0.00049	mg/L		11/14/16 12:00	11/18/16 19:10	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 19:10	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/18/16 19:10	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 19:10	5
Calcium	25		0.25	0.13	mg/L		11/14/16 12:00	11/18/16 19:10	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		11/14/16 12:00	11/18/16 19:10	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/14/16 12:00	11/18/16 19:10	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/18/16 19:10	5
Lithium	0.0036	J	0.0050	0.0032	mg/L		11/14/16 12:00	11/18/16 19:10	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/14/16 12:00	11/18/16 19:10	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/18/16 19:10	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/18/16 19:10	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		11/14/16 10:57	11/18/16 13:28	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	130		5.0	3.4	mg/L			11/12/16 16:50	1



# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-1  
SDG: AP

## Qualifiers

### HPLC/IC

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.

### 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.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

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

TestAmerica Job ID: 400-129975-1  
SDG: AP

**Client Sample ID: WGWA-2**

**Date Collected: 11/09/16 11:10**

**Date Received: 11/11/16 09:53**

**Lab Sample ID: 400-129975-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333094	11/30/16 05:32	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330917	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	331606	11/17/16 19:45	AJR	TAL PEN
Total/NA	Prep	7470A			330940	11/14/16 10:57	JAP	TAL PEN
Total/NA	Analysis	7470A		1	331706	11/18/16 13:24	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	330817	11/12/16 16:50	RRC	TAL PEN

**Client Sample ID: WGWA-18**

**Date Collected: 11/09/16 11:30**

**Date Received: 11/11/16 09:53**

**Lab Sample ID: 400-129975-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333094	11/30/16 05:55	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330917	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	331606	11/17/16 19:49	AJR	TAL PEN
Total/NA	Prep	7470A			330940	11/14/16 10:57	JAP	TAL PEN
Total/NA	Analysis	7470A		1	331706	11/18/16 13:25	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	330817	11/12/16 16:50	RRC	TAL PEN

**Client Sample ID: WGWA-1**

**Date Collected: 11/09/16 12:40**

**Date Received: 11/11/16 09:53**

**Lab Sample ID: 400-129975-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333094	11/30/16 06:18	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330917	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	331606	11/17/16 19:54	AJR	TAL PEN
Total/NA	Prep	7470A			330940	11/14/16 10:57	JAP	TAL PEN
Total/NA	Analysis	7470A		1	331706	11/18/16 13:26	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	330817	11/12/16 16:50	RRC	TAL PEN

**Client Sample ID: WGWA-6**

**Date Collected: 11/09/16 14:15**

**Date Received: 11/11/16 09:53**

**Lab Sample ID: 400-129975-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333094	11/30/16 07:26	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330919	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	331889	11/18/16 19:10	AJR	TAL PEN
Total/NA	Prep	7470A			330940	11/14/16 10:57	JAP	TAL PEN
Total/NA	Analysis	7470A		1	331706	11/18/16 13:28	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	330817	11/12/16 16:50	RRC	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-1  
SDG: AP

**Laboratory References:**

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

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# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-1  
SDG: AP

## HPLC/IC

### Analysis Batch: 333094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-129975-1	WGWA-2	Total/NA	Water	300.0	
400-129975-2	WGWA-18	Total/NA	Water	300.0	
400-129975-3	WGWA-1	Total/NA	Water	300.0	
400-129975-4	WGWA-6	Total/NA	Water	300.0	
MB 400-333094/35	Method Blank	Total/NA	Water	300.0	
LCS 400-333094/36	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-333094/37	Lab Control Sample Dup	Total/NA	Water	300.0	
400-130328-A-6 MS	Matrix Spike	Total/NA	Water	300.0	
400-130328-A-6 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

## Metals

### Prep Batch: 330917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-129975-1	WGWA-2	Total Recoverable	Water	3005A	
400-129975-2	WGWA-18	Total Recoverable	Water	3005A	
400-129975-3	WGWA-1	Total Recoverable	Water	3005A	
MB 400-330917/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-330917/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-129942-A-4-B MS ^25	Matrix Spike	Dissolved	Water	3005A	
400-129942-A-4-C MSD ^25	Matrix Spike Duplicate	Dissolved	Water	3005A	

### Prep Batch: 330919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-129975-4	WGWA-6	Total Recoverable	Water	3005A	
MB 400-330919/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-330919/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-130029-B-4-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-130029-B-4-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Prep Batch: 330940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-129975-1	WGWA-2	Total/NA	Water	7470A	
400-129975-2	WGWA-18	Total/NA	Water	7470A	
400-129975-3	WGWA-1	Total/NA	Water	7470A	
400-129975-4	WGWA-6	Total/NA	Water	7470A	
MB 400-330940/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-330940/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-129787-J-3-B MS	Matrix Spike	Total/NA	Water	7470A	
400-129787-J-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

### Analysis Batch: 331378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-330917/1-A ^5	Method Blank	Total Recoverable	Water	6020	330917
LCS 400-330917/2-A	Lab Control Sample	Total Recoverable	Water	6020	330917

### Analysis Batch: 331606

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-129975-1	WGWA-2	Total Recoverable	Water	6020	330917
400-129975-2	WGWA-18	Total Recoverable	Water	6020	330917

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-1  
SDG: AP

## Metals (Continued)

### Analysis Batch: 331606 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-129975-3	WGWA-1	Total Recoverable	Water	6020	330917
400-129942-A-4-B MS ^25	Matrix Spike	Dissolved	Water	6020	330917
400-129942-A-4-C MSD ^25	Matrix Spike Duplicate	Dissolved	Water	6020	330917

### Analysis Batch: 331706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-129975-1	WGWA-2	Total/NA	Water	7470A	330940
400-129975-2	WGWA-18	Total/NA	Water	7470A	330940
400-129975-3	WGWA-1	Total/NA	Water	7470A	330940
400-129975-4	WGWA-6	Total/NA	Water	7470A	330940
MB 400-330940/14-A	Method Blank	Total/NA	Water	7470A	330940
LCS 400-330940/15-A	Lab Control Sample	Total/NA	Water	7470A	330940
400-129787-J-3-B MS	Matrix Spike	Total/NA	Water	7470A	330940
400-129787-J-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	330940

### Analysis Batch: 331889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-129975-4	WGWA-6	Total Recoverable	Water	6020	330919
MB 400-330919/1-A ^5	Method Blank	Total Recoverable	Water	6020	330919
LCS 400-330919/2-A	Lab Control Sample	Total Recoverable	Water	6020	330919
400-130029-B-4-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	330919
400-130029-B-4-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	330919

## General Chemistry

### Analysis Batch: 330817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-129975-1	WGWA-2	Total/NA	Water	SM 2540C	
400-129975-2	WGWA-18	Total/NA	Water	SM 2540C	
400-129975-3	WGWA-1	Total/NA	Water	SM 2540C	
400-129975-4	WGWA-6	Total/NA	Water	SM 2540C	
MB 400-330817/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-330817/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-129931-B-2 DU	Duplicate	Total/NA	Water	SM 2540C	
400-129966-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-1  
SDG: AP

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 400-333094/35**  
**Matrix: Water**  
**Analysis Batch: 333094**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			11/29/16 22:18	1
Fluoride	<0.082		0.20	0.082	mg/L			11/29/16 22:18	1
Sulfate	<0.70		1.0	0.70	mg/L			11/29/16 22:18	1

**Lab Sample ID: LCS 400-333094/36**  
**Matrix: Water**  
**Analysis Batch: 333094**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.92		mg/L		99	90 - 110
Fluoride	10.0	9.86		mg/L		99	90 - 110
Sulfate	10.0	9.55		mg/L		96	90 - 110

**Lab Sample ID: LCSD 400-333094/37**  
**Matrix: Water**  
**Analysis Batch: 333094**

**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	10.0	9.94		mg/L		99	90 - 110	0	15
Fluoride	10.0	9.87		mg/L		99	90 - 110	0	15
Sulfate	10.0	9.52		mg/L		95	90 - 110	0	15

**Lab Sample ID: 400-130328-A-6 MS**  
**Matrix: Water**  
**Analysis Batch: 333094**

**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	27	F1	50.0	67.3		mg/L		80	80 - 120
Fluoride	0.41	J	50.0	51.8		mg/L		104	80 - 120
Sulfate	170	F1	50.0	221		mg/L		92	80 - 120

**Lab Sample ID: 400-130328-A-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 333094**

**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	27	F1	50.0	65.4	F1	mg/L		76	80 - 120	3	20
Fluoride	0.41	J	50.0	51.6		mg/L		103	80 - 120	0	20
Sulfate	170	F1	50.0	209	F1	mg/L		68	80 - 120	6	20

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

**Lab Sample ID: MB 400-330917/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 331378**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 330917**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/14/16 12:00	11/16/16 14:48	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/14/16 12:00	11/16/16 14:48	5

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-1  
SDG: AP

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

**Lab Sample ID: MB 400-330917/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 331378**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 330917**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		11/14/16 12:00	11/16/16 14:48	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/16/16 14:48	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/16/16 14:48	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/16/16 14:48	5
Calcium	<0.13		0.25	0.13	mg/L		11/14/16 12:00	11/16/16 14:48	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/14/16 12:00	11/16/16 14:48	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/14/16 12:00	11/16/16 14:48	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/16/16 14:48	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/14/16 12:00	11/16/16 14:48	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/14/16 12:00	11/16/16 14:48	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/16/16 14:48	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/16/16 14:48	5

**Lab Sample ID: LCS 400-330917/2-A**  
**Matrix: Water**  
**Analysis Batch: 331378**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 330917**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0498		mg/L		100	80 - 120
Arsenic	0.0500	0.0499		mg/L		100	80 - 120
Barium	0.0500	0.0492		mg/L		98	80 - 120
Beryllium	0.0500	0.0456		mg/L		91	80 - 120
Boron	0.100	0.0908		mg/L		91	80 - 120
Cadmium	0.0500	0.0489		mg/L		98	80 - 120
Calcium	5.00	4.82		mg/L		96	80 - 120
Chromium	0.0500	0.0488		mg/L		98	80 - 120
Cobalt	0.0500	0.0490		mg/L		98	80 - 120
Lead	0.0500	0.0497		mg/L		99	80 - 120
Lithium	0.0500	0.0488		mg/L		98	80 - 120
Molybdenum	0.0500	0.0494		mg/L		99	80 - 120
Selenium	0.0500	0.0493		mg/L		99	80 - 120
Thallium	0.0100	0.00994		mg/L		99	80 - 120

**Lab Sample ID: MB 400-330919/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 331889**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 330919**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/14/16 12:00	11/18/16 18:52	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/14/16 12:00	11/18/16 18:52	5
Barium	<0.00049		0.0025	0.00049	mg/L		11/14/16 12:00	11/18/16 18:52	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 18:52	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/18/16 18:52	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 18:52	5
Calcium	<0.13		0.25	0.13	mg/L		11/14/16 12:00	11/18/16 18:52	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		11/14/16 12:00	11/18/16 18:52	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/14/16 12:00	11/18/16 18:52	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/18/16 18:52	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/14/16 12:00	11/18/16 18:52	5

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-1  
SDG: AP

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

**Lab Sample ID: MB 400-330919/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 331889**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 330919**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/14/16 12:00	11/18/16 18:52	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/18/16 18:52	5
Thallium	<0.00085		0.00050	0.000085	mg/L		11/14/16 12:00	11/18/16 18:52	5

**Lab Sample ID: LCS 400-330919/2-A**  
**Matrix: Water**  
**Analysis Batch: 331889**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 330919**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0526		mg/L		105	80 - 120
Arsenic	0.0500	0.0539		mg/L		108	80 - 120
Barium	0.0500	0.0511		mg/L		102	80 - 120
Beryllium	0.0500	0.0508		mg/L		102	80 - 120
Boron	0.100	0.103		mg/L		103	80 - 120
Cadmium	0.0500	0.0509		mg/L		102	80 - 120
Calcium	5.00	4.94		mg/L		99	80 - 120
Chromium	0.0500	0.0500	^	mg/L		100	80 - 120
Cobalt	0.0500	0.0511		mg/L		102	80 - 120
Lead	0.0500	0.0504		mg/L		101	80 - 120
Lithium	0.0500	0.0533		mg/L		107	80 - 120
Molybdenum	0.0500	0.0499		mg/L		100	80 - 120
Selenium	0.0500	0.0517		mg/L		103	80 - 120
Thallium	0.0100	0.0102		mg/L		102	80 - 120

**Lab Sample ID: 400-130029-B-4-B MS ^5**  
**Matrix: Water**  
**Analysis Batch: 331889**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 330919**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0535		mg/L		107	75 - 125
Arsenic	<0.00046		0.0500	0.0540		mg/L		108	75 - 125
Barium	0.013		0.0500	0.0660		mg/L		105	75 - 125
Beryllium	<0.00034		0.0500	0.0520		mg/L		104	75 - 125
Boron	<0.021		0.100	0.111		mg/L		111	75 - 125
Cadmium	<0.00034		0.0500	0.0506		mg/L		101	75 - 125
Calcium	1.6		5.00	6.46		mg/L		97	75 - 125
Chromium	<0.0011	^	0.0500	0.0513	^	mg/L		103	75 - 125
Cobalt	<0.00040		0.0500	0.0517		mg/L		103	75 - 125
Lead	<0.00035		0.0500	0.0506		mg/L		101	75 - 125
Lithium	<0.0032		0.0500	0.0559		mg/L		112	75 - 125
Molybdenum	<0.00085		0.0500	0.0502		mg/L		100	75 - 125
Selenium	<0.00024		0.0500	0.0502		mg/L		100	75 - 125
Thallium	<0.00085		0.0100	0.0103		mg/L		103	75 - 125



# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-1  
SDG: AP

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

**Lab Sample ID: 400-130029-B-4-C MSD ^5**

**Matrix: Water**

**Analysis Batch: 331889**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total Recoverable**

**Prep Batch: 330919**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
				Result	Qualifier						
Antimony	<0.0010		0.0500	0.0522		mg/L		104	75 - 125	2	20
Arsenic	<0.00046		0.0500	0.0545		mg/L		109	75 - 125	1	20
Barium	0.013		0.0500	0.0641		mg/L		102	75 - 125	3	20
Beryllium	<0.00034		0.0500	0.0515		mg/L		103	75 - 125	1	20
Boron	<0.021		0.100	0.103		mg/L		103	75 - 125	7	20
Cadmium	<0.00034		0.0500	0.0496		mg/L		99	75 - 125	2	20
Calcium	1.6		5.00	6.53		mg/L		98	75 - 125	1	20
Chromium	<0.0011	^	0.0500	0.0514	^	mg/L		103	75 - 125	0	20
Cobalt	<0.00040		0.0500	0.0514		mg/L		103	75 - 125	1	20
Lead	<0.00035		0.0500	0.0502		mg/L		100	75 - 125	1	20
Lithium	<0.0032		0.0500	0.0550		mg/L		110	75 - 125	2	20
Molybdenum	<0.00085		0.0500	0.0476		mg/L		95	75 - 125	5	20
Selenium	<0.00024		0.0500	0.0517		mg/L		103	75 - 125	3	20
Thallium	<0.000085		0.0100	0.0103		mg/L		103	75 - 125	0	20

**Lab Sample ID: 400-129942-A-4-B MS ^25**

**Matrix: Water**

**Analysis Batch: 331606**

**Client Sample ID: Matrix Spike**

**Prep Type: Dissolved**

**Prep Batch: 330917**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
				Result	Qualifier						
Antimony	<0.0050		0.0500	0.0582		mg/L		116	75 - 125		
Arsenic	0.31		0.0500	0.369	4	mg/L		117	75 - 125		
Barium	0.048		0.0500	0.100		mg/L		104	75 - 125		
Beryllium	<0.0017		0.0500	0.0519		mg/L		104	75 - 125		
Boron	1.7		0.100	1.74	4 ^	mg/L		41	75 - 125		
Cadmium	<0.0017		0.0500	0.0510		mg/L		102	75 - 125		
Calcium	100		5.00	106	4	mg/L		112	75 - 125		
Chromium	<0.0055		0.0500	0.0504		mg/L		101	75 - 125		
Cobalt	0.0045	J	0.0500	0.0539		mg/L		99	75 - 125		
Lead	<0.0018		0.0500	0.0494		mg/L		99	75 - 125		
Lithium	0.056		0.0500	0.104		mg/L		95	75 - 125		
Molybdenum	0.018	J	0.0500	0.0703	J	mg/L		104	75 - 125		
Selenium	<0.0012		0.0500	0.0519		mg/L		104	75 - 125		
Thallium	<0.00043		0.0100	0.00978		mg/L		98	75 - 125		

**Lab Sample ID: 400-129942-A-4-C MSD ^25**

**Matrix: Water**

**Analysis Batch: 331606**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Dissolved**

**Prep Batch: 330917**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
				Result	Qualifier						
Antimony	<0.0050		0.0500	0.0527		mg/L		105	75 - 125	10	20
Arsenic	0.31		0.0500	0.367	4	mg/L		111	75 - 125	1	20
Barium	0.048		0.0500	0.103		mg/L		110	75 - 125	3	20
Beryllium	<0.0017		0.0500	0.0539		mg/L		108	75 - 125	4	20
Boron	1.7		0.100	1.77	4 ^	mg/L		67	75 - 125	2	20
Cadmium	<0.0017		0.0500	0.0471		mg/L		94	75 - 125	8	20
Calcium	100		5.00	106	4	mg/L		113	75 - 125	0	20
Chromium	<0.0055		0.0500	0.0509		mg/L		102	75 - 125	1	20

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-1  
SDG: AP

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

Lab Sample ID: 400-129942-A-4-C MSD ^25  
Matrix: Water  
Analysis Batch: 331606

Client Sample ID: Matrix Spike Duplicate  
Prep Type: Dissolved  
Prep Batch: 330917

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Cobalt	0.0045	J	0.0500	0.0545		mg/L		100	75 - 125	1	20
Lead	<0.0018		0.0500	0.0485		mg/L		97	75 - 125	2	20
Lithium	0.056		0.0500	0.104		mg/L		96	75 - 125	0	20
Molybdenum	0.018	J	0.0500	0.0664	J	mg/L		96	75 - 125	6	20
Selenium	<0.0012		0.0500	0.0480		mg/L		96	75 - 125	8	20
Thallium	<0.00043		0.0100	0.0100		mg/L		100	75 - 125	2	20

## Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-330940/14-A  
Matrix: Water  
Analysis Batch: 331706

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 330940

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000070		0.00020	0.000070	mg/L		11/14/16 09:36	11/18/16 12:41	1

Lab Sample ID: LCS 400-330940/15-A  
Matrix: Water  
Analysis Batch: 331706

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 330940

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Mercury	0.00101	0.000846		mg/L		84	80 - 120

Lab Sample ID: 400-129787-J-3-B MS  
Matrix: Water  
Analysis Batch: 331706

Client Sample ID: Matrix Spike  
Prep Type: Total/NA  
Prep Batch: 330940

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier		Result	Qualifier				Limits
Mercury	<0.000070		0.00201	0.00181		mg/L		90	80 - 120

Lab Sample ID: 400-129787-J-3-C MSD  
Matrix: Water  
Analysis Batch: 331706

Client Sample ID: Matrix Spike Duplicate  
Prep Type: Total/NA  
Prep Batch: 330940

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Mercury	<0.000070		0.00201	0.00179		mg/L		89	80 - 120	1	20

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

Lab Sample ID: MB 400-330817/1  
Matrix: Water  
Analysis Batch: 330817

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			11/12/16 16:50	1

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# QC Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-1  
 SDG: AP

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

**Lab Sample ID: LCS 400-330817/2**  
**Matrix: Water**  
**Analysis Batch: 330817**

**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: 400-129931-B-2 DU**  
**Matrix: Water**  
**Analysis Batch: 330817**

**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	36		36.0		mg/L		0	5

**Lab Sample ID: 400-129966-A-1 DU**  
**Matrix: Water**  
**Analysis Batch: 330817**

**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	80		80.0		mg/L		0	5

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

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

**Chain of Custody Record**

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING

Sampler: Cayce Hurdele C. Hill, Virgo W.V.  
 Lab P.M.: Whitnire, Chyenne R.  
 Client Contact: Joju Abraham  
 Phone: [blank]  
 E-Mail: chyenme.whitnire@testamericainc.com  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

Carrier Tracking No(s): [blank]  
 COC No: [blank]  
 Page: 1 of 1  
 Job #: [blank]

**Analysis Requested**

Due Date Requested: [blank]  
 TAT Requested (days): [blank]  
 PO #: [blank]  
 WO #: [blank]  
 Project #: [blank]  
 SSOV#: [blank]

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MSD (Yes or No)	TDS - SM 2540C : Cl, F, SO4 - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SM-946 9316 & 9320	Total Number of Containers	Special Instructions/Note:
WGWA-2	11/9/16	1110	G	W	X	X	1	1	1	3	
WGWA-18	11/9/16	1130	G	W	N	N	1	1	1	3	
WGWA-1	11/9/16	1240	G	W	N	N	1	1	1	3	
WGWA-6	11/9/16	1415	G	W	N	N	1	1	1	3	400-129975 COC

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological

Deliverable Requested: I, II, III, IV, Other (specify) [blank]

Empty Kit Relinquished by: [blank] Date: [blank] Method of Shipment: [blank]

Relinquished by: [Signature] Date/Time: 11/10/16 13:45 Company: ERM  
 Relinquished by: [Signature] Date/Time: 11/10/16 14:50 Company: DA  
 Relinquished by: [Signature] Date/Time: 11/10/16 9:53 Company: TH

Custody Seal No.: 745944  
 Custody Seals Intact: X Yes  No

Relinquished by: [Signature] Date/Time: 11/10/16 13:45 Company: DA  
 Relinquished by: [Signature] Date/Time: 11/11/16 9:53 Company: TH  
 Cooler Temperature(s) °C and Other Remarks: 0.0°C IRG



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-129975-1

SDG Number: AP

**Login Number: 129975**

**List Number: 1**

**Creator: Hughes, Nicholas T**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	745941
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 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 Wansley

TestAmerica Job ID: 400-129975-1  
SDG: AP

## Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP Secondary AB	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-16
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

# 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: 400-129975-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Plant Wansley

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

12/19/2016 5:37:43 PM

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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 Wansley

TestAmerica Job ID: 400-129975-2  
SDG: Ash Pond

**Job ID: 400-129975-2**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-129975-2

#### **RAD**

Method(s) PrecSep\_0: Radium-228 Prep Batch 160-279788: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: WGWA-2 (400-129975-1), WGWA-18 (400-129975-2), WGWA-1 (400-129975-3) and WGWA-6 (400-129975-4). 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 160-279778: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: WGWA-2 (400-129975-1), WGWA-18 (400-129975-2), WGWA-1 (400-129975-3) and WGWA-6 (400-129975-4). 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 Wansley

TestAmerica Job ID: 400-129975-2  
SDG: Ash Pond

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 Wansley

TestAmerica Job ID: 400-129975-2  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-129975-1	WGWA-2	Water	11/09/16 11:10	11/11/16 09:53
400-129975-2	WGWA-18	Water	11/09/16 11:30	11/11/16 09:53
400-129975-3	WGWA-1	Water	11/09/16 12:40	11/11/16 09:53
400-129975-4	WGWA-6	Water	11/09/16 14:15	11/11/16 09:53

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# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-2  
SDG: Ash Pond

**Client Sample ID: WGWA-2**

**Lab Sample ID: 400-129975-1**

**Date Collected: 11/09/16 11:10**

**Matrix: Water**

**Date Received: 11/11/16 09:53**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.328	U	0.241	0.243	1.00	0.342	pCi/L	11/17/16 11:15	12/16/16 06:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110					11/17/16 11:15	12/16/16 06:59	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.112	U	0.202	0.203	1.00	0.387	pCi/L	11/17/16 12:22	12/15/16 16:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110					11/17/16 12:22	12/15/16 16:05	1
Y Carrier	84.9		40 - 110					11/17/16 12:22	12/15/16 16:05	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	0.217	U	0.315	0.317	5.00	0.387	pCi/L		12/16/16 18:48	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-2  
SDG: Ash Pond

**Client Sample ID: WGWA-18**

**Lab Sample ID: 400-129975-2**

**Date Collected: 11/09/16 11:30**

**Matrix: Water**

**Date Received: 11/11/16 09:53**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.165	U	0.209	0.210	1.00	0.347	pCi/L	11/17/16 11:15	12/16/16 06:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.2		40 - 110					11/17/16 11:15	12/16/16 06:59	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0538	U	0.225	0.225	1.00	0.396	pCi/L	11/17/16 12:22	12/15/16 16:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.2		40 - 110					11/17/16 12:22	12/15/16 16:05	1
Y Carrier	86.7		40 - 110					11/17/16 12:22	12/15/16 16:05	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	0.219	U	0.307	0.308	5.00	0.396	pCi/L		12/16/16 18:48	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-2  
 SDG: Ash Pond

**Client Sample ID: WGWA-1**

**Lab Sample ID: 400-129975-3**

**Date Collected: 11/09/16 12:40**

**Matrix: Water**

**Date Received: 11/11/16 09:53**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.212	U	0.222	0.223	1.00	0.352	pCi/L	11/17/16 11:15	12/16/16 06:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.6		40 - 110					11/17/16 11:15	12/16/16 06:59	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.00850	U	0.217	0.217	1.00	0.387	pCi/L	11/17/16 12:22	12/15/16 16:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.6		40 - 110					11/17/16 12:22	12/15/16 16:05	1
Y Carrier	92.7		40 - 110					11/17/16 12:22	12/15/16 16:05	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	0.221	U	0.310	0.311	5.00	0.387	pCi/L		12/16/16 18:48	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-2  
SDG: Ash Pond

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-129975-4**

**Date Collected: 11/09/16 14:15**

**Matrix: Water**

**Date Received: 11/11/16 09:53**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.38		0.605	0.677	1.00	0.425	pCi/L	11/17/16 11:15	12/16/16 06:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					11/17/16 11:15	12/16/16 06:59	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	5.40		0.525	0.723	1.00	0.363	pCi/L	11/17/16 12:22	12/15/16 16:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					11/17/16 12:22	12/15/16 16:05	1
Y Carrier	89.7		40 - 110					11/17/16 12:22	12/15/16 16:05	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	8.78		0.801	0.991	5.00	0.425	pCi/L		12/16/16 18:48	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-2  
SDG: Ash Pond

## 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 Wansley

TestAmerica Job ID: 400-129975-2  
SDG: Ash Pond

## Client Sample ID: WGWA-2

Date Collected: 11/09/16 11:10

Date Received: 11/11/16 09:53

## Lab Sample ID: 400-129975-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279778	11/17/16 11:15	AS	TAL SL
Total/NA	Analysis	9315		1	284274	12/16/16 06:59	MLK	TAL SL
Total/NA	Prep	PrecSep_0			279788	11/17/16 12:22	AS	TAL SL
Total/NA	Analysis	9320		1	284144	12/15/16 16:05	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284392	12/16/16 18:48	RTM	TAL SL

## Client Sample ID: WGWA-18

Date Collected: 11/09/16 11:30

Date Received: 11/11/16 09:53

## Lab Sample ID: 400-129975-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279778	11/17/16 11:15	AS	TAL SL
Total/NA	Analysis	9315		1	284274	12/16/16 06:59	MLK	TAL SL
Total/NA	Prep	PrecSep_0			279788	11/17/16 12:22	AS	TAL SL
Total/NA	Analysis	9320		1	284144	12/15/16 16:05	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284392	12/16/16 18:48	RTM	TAL SL

## Client Sample ID: WGWA-1

Date Collected: 11/09/16 12:40

Date Received: 11/11/16 09:53

## Lab Sample ID: 400-129975-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279778	11/17/16 11:15	AS	TAL SL
Total/NA	Analysis	9315		1	284274	12/16/16 06:59	MLK	TAL SL
Total/NA	Prep	PrecSep_0			279788	11/17/16 12:22	AS	TAL SL
Total/NA	Analysis	9320		1	284144	12/15/16 16:05	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284392	12/16/16 18:48	RTM	TAL SL

## Client Sample ID: WGWA-6

Date Collected: 11/09/16 14:15

Date Received: 11/11/16 09:53

## Lab Sample ID: 400-129975-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279778	11/17/16 11:15	AS	TAL SL
Total/NA	Analysis	9315		1	284274	12/16/16 06:59	MLK	TAL SL
Total/NA	Prep	PrecSep_0			279788	11/17/16 12:22	AS	TAL SL
Total/NA	Analysis	9320		1	284144	12/15/16 16:05	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284392	12/16/16 18:48	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 Wansley

TestAmerica Job ID: 400-129975-2  
SDG: Ash Pond

## Rad

### Prep Batch: 279778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-129975-1	WGWA-2	Total/NA	Water	PrecSep-21	
400-129975-2	WGWA-18	Total/NA	Water	PrecSep-21	
400-129975-3	WGWA-1	Total/NA	Water	PrecSep-21	
400-129975-4	WGWA-6	Total/NA	Water	PrecSep-21	
MB 160-279778/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-279778/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-279778/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 279788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-129975-1	WGWA-2	Total/NA	Water	PrecSep_0	
400-129975-2	WGWA-18	Total/NA	Water	PrecSep_0	
400-129975-3	WGWA-1	Total/NA	Water	PrecSep_0	
400-129975-4	WGWA-6	Total/NA	Water	PrecSep_0	
MB 160-279788/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-279788/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-279788/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-2  
SDG: Ash Pond

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

**Lab Sample ID: MB 160-279778/1-A**  
**Matrix: Water**  
**Analysis Batch: 284171**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 279778**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1262	U	0.226	0.226	1.00	0.394	pCi/L	11/17/16 11:15	12/16/16 06:52	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110					11/17/16 11:15	12/16/16 06:52	1

**Lab Sample ID: LCS 160-279778/2-A**  
**Matrix: Water**  
**Analysis Batch: 284171**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 279778**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.1	12.62		1.56	1.00	0.380	pCi/L	114	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	85.8		40 - 110						

**Lab Sample ID: LCSD 160-279778/3-A**  
**Matrix: Water**  
**Analysis Batch: 284171**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 279778**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.1	14.04		1.70	1.00	0.325	pCi/L	127	68 - 137	0.44	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	84.9		40 - 110								

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

**Lab Sample ID: MB 160-279788/1-A**  
**Matrix: Water**  
**Analysis Batch: 284110**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 279788**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2927	U	0.231	0.232	1.00	0.363	pCi/L	11/17/16 12:22	12/15/16 16:10	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110					11/17/16 12:22	12/15/16 16:10	1
Y Carrier	89.7		40 - 110					11/17/16 12:22	12/15/16 16:10	1

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-2  
 SDG: Ash Pond

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

**Lab Sample ID: LCS 160-279788/2-A**  
**Matrix: Water**  
**Analysis Batch: 284110**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 279788**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.1	16.57		1.75	1.00	0.387	pCi/L	117	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	85.8		40 - 110
Y Carrier	90.8		40 - 110

**Lab Sample ID: LCSD 160-279788/3-A**  
**Matrix: Water**  
**Analysis Batch: 284110**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 279788**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	14.1	16.07		1.71	1.00	0.355	pCi/L	114	56 - 140	0.15	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	84.9		40 - 110
Y Carrier	91.6		40 - 110

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

**Chain of Custody Record**

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING

Carrier Tracking No(s):  
 Lab P/N: Whitmire, Cheyenne R  
 Sampler: Cayce Hurdele C. Hill Virgo W.V.  
 Phone: E-Mail: cheyenne.whitmire@testamericainc.com  
 Client Information  
 Client Contact: Joju Abraham  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

Due Date Requested:  
 TAT Requested (days):  
 PO #:  
 WO #:  
 Project #:  
 SSOW#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (W=water, S=solid, O=wastewater, B=soils, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TDS - SM 2540C : Cl,F,S04 - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320	Total Number of Containers	Special Instructions/Note:
WGWA-2	11/9/16	1110	G	W	N	N	1	1	1	3	
WGWA-18	11/9/16	1130	G	W	N	N	1	1	1	3	
WGWA-1	11/9/16	1240	G	W	N	N	1	1	1	3	
WGWA-6	11/9/16	1415	G	W	N	N	1	1	1	3	400-129975 COC

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

**Empty Kit Relinquished by:** \_\_\_\_\_ Date: \_\_\_\_\_  
**Relinquished by:** \_\_\_\_\_ Date/Time: 11/10/16 13:45 Company: ERW  
**Relinquished by:** \_\_\_\_\_ Date/Time: 11/10/16 14:50 Company: TA  
**Relinquished by:** \_\_\_\_\_ Date/Time: 11/11/16 9:53 Company: TA  
 Cooler Temperature(s) °C and Other Remarks: 0.0°C IRG  
 Custody Seal No.: 74594



# Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-129975-2

SDG Number: Ash Pond

**Login Number: 129975**

**List Number: 1**

**Creator: Hughes, Nicholas T**

**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	745941
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 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 Wansley

TestAmerica Job ID: 400-129975-2  
SDG: Ash Pond

## 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	12-31-16
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

## Laboratory: TestAmerica St. Louis

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-17
California	State Program	9	2886	03-31-18
Connecticut	State Program	1	PH-0241	03-31-17
Florida	NELAP	4	E87689	06-30-17
Illinois	NELAP	5	003757	11-30-16 *
Iowa	State Program	7	373	12-01-16 *
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-16
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17
Louisiana (DW)	NELAP	6	LA160008	12-31-16 *
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17
Nevada	State Program	9	MO000542016-1	07-31-17
New Jersey	NELAP	2	MO002	06-30-17
New York	NELAP	2	11616	03-31-17
North Dakota	State Program	8	R207	06-30-17

\* Certification renewal pending - certification considered valid.

# Certification Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-129975-2  
SDG: Ash Pond

## 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

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-130029-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Plant Wansley

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

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Authorized for release by:

12/9/2016 2:39:42 PM

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### LINKS

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

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

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

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# Case Narrative

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Job ID: 400-130029-1**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-130029-1

#### HPLC/IC

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: WGWC-16 (400-130029-6) and WGWC-15 (400-130029-9). Elevated reporting limits (RLs) are provided.

#### Metals

Method(s) 6020: The interference check standard solution (ICSA) associated with batch 331889 had results for Chromium at a level greater than 2 times the reporting limit (RL). The associated samples are either Non-Detect (<RL) or >10x analyte result in ICSA (spiked samples), and have been qualified and reported.

Method(s) 6020: The following sample was diluted to bring the concentration of target analytes within the calibration range: WGWC-16 (400-130029-6). Elevated reporting limits (RLs) are provided.

Method(s) 7470A: The method blank for prep batch 332972 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.

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# Detection Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

## Client Sample ID: WGWA-7

## Lab Sample ID: 400-130029-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.8		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.016		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	6.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00055	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.000087	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	44		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FB-1

## Lab Sample ID: 400-130029-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Selenium	0.00032	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Mercury	0.000079	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

## Client Sample ID: FERB-1

## Lab Sample ID: 400-130029-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.00014	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

## Client Sample ID: WGWA-3

## Lab Sample ID: 400-130029-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.6		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.73	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.013		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.6		0.25	0.13	mg/L	5		6020	Total Recoverable
Mercury	0.00015	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

## Client Sample ID: WGWA-4

## Lab Sample ID: 400-130029-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.3		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.12	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	5.4		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00078	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.0063		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	15		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0048	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Mercury	0.00016	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	110		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-16

## Lab Sample ID: 400-130029-6

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

## Client Sample ID: WGWC-16 (Continued)

## Lab Sample ID: 400-130029-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	290		20	18	mg/L	20		300.0	Total/NA
Fluoride	0.11	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	530		20	14	mg/L	20		300.0	Total/NA
Arsenic	0.0021		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.069		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cobalt	0.016		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.013		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.0056		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00017	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	6.7		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	240		5.0	2.5	mg/L	100		6020	Total Recoverable
Mercury	0.00012	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	1400		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-17

## Lab Sample ID: 400-130029-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.6		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.15	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	5.2		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00082	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.020		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	11		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0016	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0066		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0076	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	98		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-14

## Lab Sample ID: 400-130029-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.2		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	2.6		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.15		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.029	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	4.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	92		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 Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

## Client Sample ID: WGWC-15

## Lab Sample ID: 400-130029-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.5		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.88		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	61		5.0	3.5	mg/L	5		300.0	Total/NA
Arsenic	0.0023		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.020		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	29		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0064		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0065	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Mercury	0.000085	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	210		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-13

## Lab Sample ID: 400-130029-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.26		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	5.7		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.040		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	6.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Lead	0.00047	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Lithium	0.0038	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0016	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Mercury	0.000083	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	100		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: DUP-1

## Lab Sample ID: 400-130029-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.6		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.13	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	5.2		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.019		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	9.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0016	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0058		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0050	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Mercury	0.00012	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	100		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 Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

## Client Sample ID: WGWC-10

## Lab Sample ID: 400-130029-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.5		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.14	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	2.6		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.042		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	8.2		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	0.0010	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.017		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Mercury	0.000085	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	72		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FB-2

## Lab Sample ID: 400-130029-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.000085	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

## Client Sample ID: WGWC-11

## Lab Sample ID: 400-130029-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.2		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	1.4		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.034		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00052	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	42		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FERB-2

## Lab Sample ID: 400-130029-15

No Detections.

## Client Sample ID: WGCW-12

## Lab Sample ID: 400-130029-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.5		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	14		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.022		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	15		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0017	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0070		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Mercury	0.000079	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	100		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 Wansley

TestAmerica Job ID: 400-130029-1  
 SDG: Ash Pond

## Client Sample ID: WGWC-19

## Lab Sample ID: 400-130029-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.6		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.32		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	3.4		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.0022	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	12		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.045		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Mercury	0.000076	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	98		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: DUP-2

## Lab Sample ID: 400-130029-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.2		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	1.4		1.0	0.70	mg/L	1		300.0	Total/NA
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
Cobalt	0.00053	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	42		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola



# Method Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN

#### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-130029-1	WGWA-7	Water	11/10/16 09:00	11/12/16 08:50
400-130029-2	FB-1	Water	11/10/16 09:10	11/12/16 08:50
400-130029-3	FERB-1	Water	11/10/16 09:40	11/12/16 08:50
400-130029-4	WGWA-3	Water	11/10/16 09:25	11/12/16 08:50
400-130029-5	WGWA-4	Water	11/10/16 11:10	11/12/16 08:50
400-130029-6	WGWC-16	Water	11/10/16 12:55	11/12/16 08:50
400-130029-7	WGWC-17	Water	11/10/16 13:50	11/12/16 08:50
400-130029-8	WGWC-14	Water	11/10/16 15:25	11/12/16 08:50
400-130029-9	WGWC-15	Water	11/10/16 16:25	11/12/16 08:50
400-130029-10	WGWC-13	Water	11/10/16 16:26	11/12/16 08:50
400-130029-11	DUP-1	Water	11/10/16 00:00	11/12/16 08:50
400-130029-12	WGWC-10	Water	11/11/16 09:55	11/12/16 08:50
400-130029-13	FB-2	Water	11/11/16 09:55	11/12/16 08:50
400-130029-14	WGWC-11	Water	11/11/16 10:00	11/12/16 08:50
400-130029-15	FERB-2	Water	11/11/16 10:10	11/12/16 08:50
400-130029-16	WGCW-12	Water	11/11/16 12:15	11/12/16 08:50
400-130029-17	WGWC-19	Water	11/11/16 12:20	11/12/16 08:50
400-130029-18	DUP-2	Water	11/11/16 00:00	11/12/16 08:50

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: WGWA-7**

**Date Collected: 11/10/16 09:00**

**Date Received: 11/12/16 08:50**

**Lab Sample ID: 400-130029-1**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>1.8</b>		1.0	0.89	mg/L			11/30/16 16:36	1
Fluoride	<0.082		0.20	0.082	mg/L			11/30/16 16:36	1
Sulfate	<0.70		1.0	0.70	mg/L			11/30/16 16:36	1

### 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		11/14/16 12:00	11/18/16 19:15	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/14/16 12:00	11/18/16 19:15	5
<b>Barium</b>	<b>0.016</b>		0.0025	0.00049	mg/L		11/14/16 12:00	11/18/16 19:15	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 19:15	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/18/16 19:15	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 19:15	5
<b>Calcium</b>	<b>6.1</b>		0.25	0.13	mg/L		11/14/16 12:00	11/18/16 19:15	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		11/14/16 12:00	11/18/16 19:15	5
<b>Cobalt</b>	<b>0.00055</b>	<b>J</b>	0.0025	0.00040	mg/L		11/14/16 12:00	11/18/16 19:15	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/18/16 19:15	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/14/16 12:00	11/18/16 19:15	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/14/16 12:00	11/18/16 19:15	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/18/16 19:15	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/18/16 19:15	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.000087</b>	<b>J B</b>	0.00020	0.000070	mg/L		11/29/16 12:42	11/30/16 13:41	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>44</b>		5.0	3.4	mg/L			11/15/16 16:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: FB-1**  
**Date Collected: 11/10/16 09:10**  
**Date Received: 11/12/16 08:50**

**Lab Sample ID: 400-130029-2**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			11/30/16 16:58	1
Fluoride	<0.082		0.20	0.082	mg/L			11/30/16 16:58	1
Sulfate	<0.70		1.0	0.70	mg/L			11/30/16 16:58	1

### 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		11/14/16 12:00	11/18/16 19:01	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/14/16 12:00	11/18/16 19:01	5
Barium	<0.00049		0.0025	0.00049	mg/L		11/14/16 12:00	11/18/16 19:01	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 19:01	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/18/16 19:01	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 19:01	5
Calcium	<0.13		0.25	0.13	mg/L		11/14/16 12:00	11/18/16 19:01	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		11/14/16 12:00	11/18/16 19:01	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/14/16 12:00	11/18/16 19:01	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/18/16 19:01	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/14/16 12:00	11/18/16 19:01	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/14/16 12:00	11/18/16 19:01	5
<b>Selenium</b>	<b>0.00032</b>	<b>J</b>	0.0013	0.00024	mg/L		11/14/16 12:00	11/18/16 19:01	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/18/16 19:01	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.000079</b>	<b>J B</b>	0.00020	0.000070	mg/L		11/29/16 12:42	11/30/16 14:01	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			11/15/16 16:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: FERB-1**

**Date Collected: 11/10/16 09:40**

**Date Received: 11/12/16 08:50**

**Lab Sample ID: 400-130029-3**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			11/30/16 17:21	1
Fluoride	<0.082		0.20	0.082	mg/L			11/30/16 17:21	1
Sulfate	<0.70		1.0	0.70	mg/L			11/30/16 17:21	1

### 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		11/14/16 12:00	11/18/16 19:19	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/14/16 12:00	11/18/16 19:19	5
Barium	<0.00049		0.0025	0.00049	mg/L		11/14/16 12:00	11/18/16 19:19	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 19:19	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/18/16 19:19	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 19:19	5
Calcium	<0.13		0.25	0.13	mg/L		11/14/16 12:00	11/18/16 19:19	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		11/14/16 12:00	11/18/16 19:19	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/14/16 12:00	11/18/16 19:19	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/18/16 19:19	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/14/16 12:00	11/18/16 19:19	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/14/16 12:00	11/18/16 19:19	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/18/16 19:19	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/18/16 19:19	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00014	J B	0.00020	0.000070	mg/L		11/29/16 12:42	11/30/16 14:03	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			11/15/16 16:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: WGWA-3**

**Lab Sample ID: 400-130029-4**

**Date Collected: 11/10/16 09:25**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>1.6</b>		1.0	0.89	mg/L			11/30/16 17:44	1
Fluoride	<0.082		0.20	0.082	mg/L			11/30/16 17:44	1
<b>Sulfate</b>	<b>0.73</b>	<b>J</b>	1.0	0.70	mg/L			11/30/16 17:44	1

## 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		11/14/16 12:00	11/18/16 19:46	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/14/16 12:00	11/18/16 19:46	5
<b>Barium</b>	<b>0.013</b>		0.0025	0.00049	mg/L		11/14/16 12:00	11/18/16 19:46	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 19:46	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/18/16 19:46	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 19:46	5
<b>Calcium</b>	<b>1.6</b>		0.25	0.13	mg/L		11/14/16 12:00	11/18/16 19:46	5
Chromium	<0.0011	<sup>^</sup>	0.0025	0.0011	mg/L		11/14/16 12:00	11/18/16 19:46	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/14/16 12:00	11/18/16 19:46	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/18/16 19:46	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/14/16 12:00	11/18/16 19:46	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/14/16 12:00	11/18/16 19:46	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/18/16 19:46	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/18/16 19:46	5

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.00015</b>	<b>J B</b>	0.00020	0.000070	mg/L		11/29/16 12:42	11/30/16 14:04	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>30</b>		5.0	3.4	mg/L			11/15/16 16:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-130029-5**

**Date Collected: 11/10/16 11:10**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.3		1.0	0.89	mg/L			11/30/16 18:07	1
Fluoride	0.12	J	0.20	0.082	mg/L			11/30/16 18:07	1
Sulfate	5.4		1.0	0.70	mg/L			11/30/16 18:07	1

### 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		11/14/16 12:00	11/18/16 20:09	5
Arsenic	0.00078	J	0.0013	0.00046	mg/L		11/14/16 12:00	11/18/16 20:09	5
Barium	0.0063		0.0025	0.00049	mg/L		11/14/16 12:00	11/18/16 20:09	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 20:09	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/18/16 20:09	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 20:09	5
Calcium	15		0.25	0.13	mg/L		11/14/16 12:00	11/18/16 20:09	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		11/14/16 12:00	11/18/16 20:09	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/14/16 12:00	11/18/16 20:09	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/18/16 20:09	5
Lithium	0.0048	J	0.0050	0.0032	mg/L		11/14/16 12:00	11/18/16 20:09	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/14/16 12:00	11/18/16 20:09	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/18/16 20:09	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/18/16 20:09	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00016	J B	0.00020	0.000070	mg/L		11/29/16 12:42	11/30/16 14:06	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	110		5.0	3.4	mg/L			11/15/16 16:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-130029-6**

**Date Collected: 11/10/16 12:55**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	290		20	18	mg/L			12/06/16 18:52	20
Fluoride	0.11	J	0.20	0.082	mg/L			11/30/16 18:30	1
Sulfate	530		20	14	mg/L			12/06/16 18:52	20

**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		11/14/16 12:00	11/18/16 21:25	5
Arsenic	0.0021		0.0013	0.00046	mg/L		11/14/16 12:00	11/18/16 21:25	5
Barium	0.069		0.0025	0.00049	mg/L		11/14/16 12:00	11/18/16 21:25	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 21:25	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 21:25	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		11/14/16 12:00	11/18/16 21:25	5
Cobalt	0.016		0.0025	0.00040	mg/L		11/14/16 12:00	11/18/16 21:25	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/18/16 21:25	5
Lithium	0.013		0.0050	0.0032	mg/L		11/14/16 12:00	11/18/16 21:25	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/14/16 12:00	11/18/16 21:25	5
Selenium	0.0056		0.0013	0.00024	mg/L		11/14/16 12:00	11/18/16 21:25	5
Thallium	0.00017	J	0.00050	0.000085	mg/L		11/14/16 12:00	11/18/16 21:25	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.7		1.0	0.42	mg/L		11/14/16 12:00	11/18/16 21:30	100
Calcium	240		5.0	2.5	mg/L		11/14/16 12:00	11/18/16 21:30	100

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00012	J B	0.00020	0.000070	mg/L		11/29/16 12:42	11/30/16 14:07	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1400		5.0	3.4	mg/L			11/15/16 16:26	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-130029-7**

**Date Collected: 11/10/16 13:50**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.6		1.0	0.89	mg/L			11/30/16 19:15	1
Fluoride	0.15	J	0.20	0.082	mg/L			11/30/16 19:15	1
Sulfate	5.2		1.0	0.70	mg/L			11/30/16 19:15	1

### 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		11/14/16 12:00	11/18/16 20:13	5
Arsenic	0.00082	J	0.0013	0.00046	mg/L		11/14/16 12:00	11/18/16 20:13	5
Barium	0.020		0.0025	0.00049	mg/L		11/14/16 12:00	11/18/16 20:13	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 20:13	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/18/16 20:13	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 20:13	5
Calcium	11		0.25	0.13	mg/L		11/14/16 12:00	11/18/16 20:13	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		11/14/16 12:00	11/18/16 20:13	5
Cobalt	0.0016	J	0.0025	0.00040	mg/L		11/14/16 12:00	11/18/16 20:13	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/18/16 20:13	5
Lithium	0.0066		0.0050	0.0032	mg/L		11/14/16 12:00	11/18/16 20:13	5
Molybdenum	0.0076	J	0.015	0.00085	mg/L		11/14/16 12:00	11/18/16 20:13	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/18/16 20:13	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/18/16 20:13	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		11/29/16 12:42	11/30/16 14:08	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	98		5.0	3.4	mg/L			11/15/16 16:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: WGWC-14**

**Lab Sample ID: 400-130029-8**

**Date Collected: 11/10/16 15:25**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.2</b>		1.0	0.89	mg/L			11/30/16 19:38	1
Fluoride	<0.082		0.20	0.082	mg/L			11/30/16 19:38	1
<b>Sulfate</b>	<b>2.6</b>		1.0	0.70	mg/L			11/30/16 19:38	1

### 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		11/14/16 12:00	11/18/16 20:18	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/14/16 12:00	11/18/16 20:18	5
<b>Barium</b>	<b>0.15</b>		0.0025	0.00049	mg/L		11/14/16 12:00	11/18/16 20:18	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 20:18	5
<b>Boron</b>	<b>0.029</b>	J	0.050	0.021	mg/L		11/14/16 12:00	11/18/16 20:18	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 20:18	5
<b>Calcium</b>	<b>4.7</b>		0.25	0.13	mg/L		11/14/16 12:00	11/18/16 20:18	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		11/14/16 12:00	11/18/16 20:18	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/14/16 12:00	11/18/16 20:18	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/18/16 20:18	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/14/16 12:00	11/18/16 20:18	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/14/16 12:00	11/18/16 20:18	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/18/16 20:18	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/18/16 20:18	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		11/29/16 12:42	11/30/16 14:09	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>92</b>		5.0	3.4	mg/L			11/15/16 16:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-130029-9**

**Date Collected: 11/10/16 16:25**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.5		1.0	0.89	mg/L			11/30/16 20:01	1
Fluoride	0.88		0.20	0.082	mg/L			11/30/16 20:01	1
Sulfate	61		5.0	3.5	mg/L			12/06/16 19:38	5

### 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		11/14/16 12:00	11/18/16 20:22	5
Arsenic	0.0023		0.0013	0.00046	mg/L		11/14/16 12:00	11/18/16 20:22	5
Barium	0.020		0.0025	0.00049	mg/L		11/14/16 12:00	11/18/16 20:22	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 20:22	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/18/16 20:22	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 20:22	5
Calcium	29		0.25	0.13	mg/L		11/14/16 12:00	11/18/16 20:22	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		11/14/16 12:00	11/18/16 20:22	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/14/16 12:00	11/18/16 20:22	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/18/16 20:22	5
Lithium	0.0064		0.0050	0.0032	mg/L		11/14/16 12:00	11/18/16 20:22	5
Molybdenum	0.0065	J	0.015	0.00085	mg/L		11/14/16 12:00	11/18/16 20:22	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/18/16 20:22	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/18/16 20:22	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000085	J B	0.00020	0.000070	mg/L		11/29/16 12:42	11/30/16 14:11	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	210		5.0	3.4	mg/L			11/15/16 16:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-130029-10**

**Date Collected: 11/10/16 16:26**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4		1.0	0.89	mg/L			11/30/16 21:09	1
Fluoride	0.26		0.20	0.082	mg/L			11/30/16 21:09	1
Sulfate	5.7		1.0	0.70	mg/L			11/30/16 21:09	1

### 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		11/14/16 12:00	11/18/16 20:27	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/14/16 12:00	11/18/16 20:27	5
Barium	0.040		0.0025	0.00049	mg/L		11/14/16 12:00	11/18/16 20:27	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 20:27	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/18/16 20:27	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 20:27	5
Calcium	6.4		0.25	0.13	mg/L		11/14/16 12:00	11/18/16 20:27	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		11/14/16 12:00	11/18/16 20:27	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/14/16 12:00	11/18/16 20:27	5
Lead	0.00047	J	0.0013	0.00035	mg/L		11/14/16 12:00	11/18/16 20:27	5
Lithium	0.0038	J	0.0050	0.0032	mg/L		11/14/16 12:00	11/18/16 20:27	5
Molybdenum	0.0016	J	0.015	0.00085	mg/L		11/14/16 12:00	11/18/16 20:27	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/18/16 20:27	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/18/16 20:27	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000083	J B	0.00020	0.000070	mg/L		11/29/16 12:42	11/30/16 14:12	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	100		5.0	3.4	mg/L			11/15/16 16:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: DUP-1**  
**Date Collected: 11/10/16 00:00**  
**Date Received: 11/12/16 08:50**

**Lab Sample ID: 400-130029-11**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.6		1.0	0.89	mg/L			11/30/16 21:32	1
Fluoride	0.13	J	0.20	0.082	mg/L			11/30/16 21:32	1
Sulfate	5.2		1.0	0.70	mg/L			11/30/16 21:32	1

### 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		11/14/16 12:00	11/18/16 21:21	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/14/16 12:00	11/18/16 21:21	5
Barium	0.019		0.0025	0.00049	mg/L		11/14/16 12:00	11/18/16 21:21	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 21:21	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/18/16 21:21	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 21:21	5
Calcium	9.8		0.25	0.13	mg/L		11/14/16 12:00	11/18/16 21:21	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		11/14/16 12:00	11/18/16 21:21	5
Cobalt	0.0016	J	0.0025	0.00040	mg/L		11/14/16 12:00	11/18/16 21:21	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/18/16 21:21	5
Lithium	0.0058		0.0050	0.0032	mg/L		11/14/16 12:00	11/18/16 21:21	5
Molybdenum	0.0050	J	0.015	0.00085	mg/L		11/14/16 12:00	11/18/16 21:21	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/18/16 21:21	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/18/16 21:21	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00012	J B	0.00020	0.000070	mg/L		11/29/16 12:42	11/30/16 14:23	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	100		5.0	3.4	mg/L			11/15/16 16:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-130029-12**

**Date Collected: 11/11/16 09:55**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.5		1.0	0.89	mg/L			11/30/16 21:55	1
Fluoride	0.14	J	0.20	0.082	mg/L			11/30/16 21:55	1
Sulfate	2.6		1.0	0.70	mg/L			11/30/16 21:55	1

### 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		11/14/16 12:00	11/18/16 20:54	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/14/16 12:00	11/18/16 20:54	5
Barium	0.042		0.0025	0.00049	mg/L		11/14/16 12:00	11/18/16 20:54	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 20:54	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/18/16 20:54	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 20:54	5
Calcium	8.2		0.25	0.13	mg/L		11/14/16 12:00	11/18/16 20:54	5
Chromium	0.0015	J ^	0.0025	0.0011	mg/L		11/14/16 12:00	11/18/16 20:54	5
Cobalt	0.0010	J	0.0025	0.00040	mg/L		11/14/16 12:00	11/18/16 20:54	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/18/16 20:54	5
Lithium	0.017		0.0050	0.0032	mg/L		11/14/16 12:00	11/18/16 20:54	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/14/16 12:00	11/18/16 20:54	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/18/16 20:54	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/18/16 20:54	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000085	J B	0.00020	0.000070	mg/L		11/29/16 12:42	11/30/16 14:24	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	72		5.0	3.4	mg/L			11/16/16 17:01	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: FB-2**  
**Date Collected: 11/11/16 09:55**  
**Date Received: 11/12/16 08:50**

**Lab Sample ID: 400-130029-13**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			11/30/16 22:18	1
Fluoride	<0.082		0.20	0.082	mg/L			11/30/16 22:18	1
Sulfate	<0.70		1.0	0.70	mg/L			11/30/16 22:18	1

### 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		11/14/16 12:00	11/21/16 14:53	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/14/16 12:00	11/21/16 14:53	5
Barium	<0.00049		0.0025	0.00049	mg/L		11/14/16 12:00	11/21/16 14:53	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/21/16 14:53	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/21/16 14:53	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/21/16 14:53	5
Calcium	<0.13		0.25	0.13	mg/L		11/14/16 12:00	11/21/16 14:53	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/14/16 12:00	11/21/16 14:53	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/14/16 12:00	11/21/16 14:53	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/21/16 14:53	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/14/16 12:00	11/21/16 14:53	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/14/16 12:00	11/21/16 14:53	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/21/16 14:53	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/21/16 14:53	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000085	J B	0.00020	0.000070	mg/L		11/29/16 12:42	11/30/16 14:26	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			11/16/16 17:01	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-130029-14**

**Date Collected: 11/11/16 10:00**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.2</b>		1.0	0.89	mg/L			11/30/16 22:41	1
Fluoride	<0.082		0.20	0.082	mg/L			11/30/16 22:41	1
<b>Sulfate</b>	<b>1.4</b>		1.0	0.70	mg/L			11/30/16 22:41	1

## 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		11/14/16 12:00	11/18/16 20:58	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/14/16 12:00	11/18/16 20:58	5
<b>Barium</b>	<b>0.034</b>		0.0025	0.00049	mg/L		11/14/16 12:00	11/18/16 20:58	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 20:58	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/18/16 20:58	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 20:58	5
<b>Calcium</b>	<b>1.7</b>		0.25	0.13	mg/L		11/14/16 12:00	11/18/16 20:58	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		11/14/16 12:00	11/18/16 20:58	5
<b>Cobalt</b>	<b>0.00052</b>	<b>J</b>	0.0025	0.00040	mg/L		11/14/16 12:00	11/18/16 20:58	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/18/16 20:58	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/14/16 12:00	11/18/16 20:58	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/14/16 12:00	11/18/16 20:58	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/18/16 20:58	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/18/16 20:58	5

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.00011</b>	<b>J B</b>	0.00020	0.000070	mg/L		11/29/16 12:42	11/30/16 14:27	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>42</b>		5.0	3.4	mg/L			11/16/16 17:01	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: FERB-2**  
**Date Collected: 11/11/16 10:10**  
**Date Received: 11/12/16 08:50**

**Lab Sample ID: 400-130029-15**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			11/30/16 23:03	1
Fluoride	<0.082		0.20	0.082	mg/L			11/30/16 23:03	1
Sulfate	<0.70		1.0	0.70	mg/L			11/30/16 23:03	1

### 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		11/14/16 12:00	11/18/16 21:03	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/14/16 12:00	11/18/16 21:03	5
Barium	<0.00049		0.0025	0.00049	mg/L		11/14/16 12:00	11/18/16 21:03	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 21:03	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/18/16 21:03	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 21:03	5
Calcium	<0.13		0.25	0.13	mg/L		11/14/16 12:00	11/18/16 21:03	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		11/14/16 12:00	11/18/16 21:03	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/14/16 12:00	11/18/16 21:03	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/18/16 21:03	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/14/16 12:00	11/18/16 21:03	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/14/16 12:00	11/18/16 21:03	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/18/16 21:03	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/18/16 21:03	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		11/29/16 12:42	11/30/16 14:28	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			11/16/16 17:01	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: WGCW-12**

**Lab Sample ID: 400-130029-16**

**Date Collected: 11/11/16 12:15**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.5</b>		1.0	0.89	mg/L			12/01/16 00:35	1
Fluoride	<0.082		0.20	0.082	mg/L			12/01/16 00:35	1
<b>Sulfate</b>	<b>14</b>		1.0	0.70	mg/L			12/01/16 00:35	1

## 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		11/14/16 12:00	11/18/16 21:07	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/14/16 12:00	11/18/16 21:07	5
<b>Barium</b>	<b>0.022</b>		0.0025	0.00049	mg/L		11/14/16 12:00	11/18/16 21:07	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 21:07	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/18/16 21:07	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 21:07	5
<b>Calcium</b>	<b>15</b>		0.25	0.13	mg/L		11/14/16 12:00	11/18/16 21:07	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		11/14/16 12:00	11/18/16 21:07	5
<b>Cobalt</b>	<b>0.0017</b>	<b>J</b>	0.0025	0.00040	mg/L		11/14/16 12:00	11/18/16 21:07	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/18/16 21:07	5
<b>Lithium</b>	<b>0.0070</b>		0.0050	0.0032	mg/L		11/14/16 12:00	11/18/16 21:07	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/14/16 12:00	11/18/16 21:07	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/18/16 21:07	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/18/16 21:07	5

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.000079</b>	<b>J B</b>	0.00020	0.000070	mg/L		11/29/16 12:42	11/30/16 14:29	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>100</b>		5.0	3.4	mg/L			11/16/16 17:01	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-130029-17**

**Date Collected: 11/11/16 12:20**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.6		1.0	0.89	mg/L			12/01/16 02:29	1
Fluoride	0.32		0.20	0.082	mg/L			12/01/16 02:29	1
Sulfate	3.4		1.0	0.70	mg/L			12/01/16 02:29	1

### 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		11/14/16 12:00	11/18/16 21:12	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/14/16 12:00	11/18/16 21:12	5
Barium	0.0022	J	0.0025	0.00049	mg/L		11/14/16 12:00	11/18/16 21:12	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 21:12	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/18/16 21:12	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 21:12	5
Calcium	12		0.25	0.13	mg/L		11/14/16 12:00	11/18/16 21:12	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		11/14/16 12:00	11/18/16 21:12	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/14/16 12:00	11/18/16 21:12	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/18/16 21:12	5
Lithium	0.045		0.0050	0.0032	mg/L		11/14/16 12:00	11/18/16 21:12	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/14/16 12:00	11/18/16 21:12	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/18/16 21:12	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/18/16 21:12	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000076	J B	0.00020	0.000070	mg/L		11/29/16 12:42	11/30/16 14:31	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	98		5.0	3.4	mg/L			11/16/16 17:01	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: DUP-2**

**Date Collected: 11/11/16 00:00**

**Date Received: 11/12/16 08:50**

**Lab Sample ID: 400-130029-18**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.2</b>		1.0	0.89	mg/L			12/01/16 02:52	1
Fluoride	<0.082		0.20	0.082	mg/L			12/01/16 02:52	1
<b>Sulfate</b>	<b>1.4</b>		1.0	0.70	mg/L			12/01/16 02:52	1

### 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		11/14/16 12:00	11/18/16 21:16	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/14/16 12:00	11/18/16 21:16	5
<b>Barium</b>	<b>0.035</b>		0.0025	0.00049	mg/L		11/14/16 12:00	11/18/16 21:16	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 21:16	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/18/16 21:16	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 21:16	5
<b>Calcium</b>	<b>1.8</b>		0.25	0.13	mg/L		11/14/16 12:00	11/18/16 21:16	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		11/14/16 12:00	11/18/16 21:16	5
<b>Cobalt</b>	<b>0.00053</b>	<b>J</b>	0.0025	0.00040	mg/L		11/14/16 12:00	11/18/16 21:16	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/18/16 21:16	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/14/16 12:00	11/18/16 21:16	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/14/16 12:00	11/18/16 21:16	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/18/16 21:16	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/18/16 21:16	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.00013</b>	<b>J B</b>	0.00020	0.000070	mg/L		11/29/16 12:42	11/30/16 14:32	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>42</b>		5.0	3.4	mg/L			11/15/16 16:26	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

## Qualifiers

### HPLC/IC

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.

### 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.

## 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 Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: WGWA-7**

**Date Collected: 11/10/16 09:00**

**Date Received: 11/12/16 08:50**

**Lab Sample ID: 400-130029-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333139	11/30/16 16:36	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330919	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	331889	11/18/16 19:15	AJR	TAL PEN
Total/NA	Prep	7470A			332972	11/29/16 12:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 13:41	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331207	11/15/16 16:26	TET	TAL PEN

**Client Sample ID: FB-1**

**Date Collected: 11/10/16 09:10**

**Date Received: 11/12/16 08:50**

**Lab Sample ID: 400-130029-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333139	11/30/16 16:58	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330919	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	331889	11/18/16 19:01	AJR	TAL PEN
Total/NA	Prep	7470A			332972	11/29/16 12:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 14:01	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331207	11/15/16 16:26	TET	TAL PEN

**Client Sample ID: FERB-1**

**Date Collected: 11/10/16 09:40**

**Date Received: 11/12/16 08:50**

**Lab Sample ID: 400-130029-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333139	11/30/16 17:21	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330919	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	331889	11/18/16 19:19	AJR	TAL PEN
Total/NA	Prep	7470A			332972	11/29/16 12:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 14:03	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331207	11/15/16 16:26	TET	TAL PEN

**Client Sample ID: WGWA-3**

**Date Collected: 11/10/16 09:25**

**Date Received: 11/12/16 08:50**

**Lab Sample ID: 400-130029-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333139	11/30/16 17:44	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330919	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	331889	11/18/16 19:46	AJR	TAL PEN
Total/NA	Prep	7470A			332972	11/29/16 12:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 14:04	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331207	11/15/16 16:26	TET	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-130029-5**

**Date Collected: 11/10/16 11:10**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333139	11/30/16 18:07	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330919	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	331889	11/18/16 20:09	AJR	TAL PEN
Total/NA	Prep	7470A			332972	11/29/16 12:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 14:06	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331207	11/15/16 16:26	TET	TAL PEN

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-130029-6**

**Date Collected: 11/10/16 12:55**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333139	11/30/16 18:30	TAJ	TAL PEN
Total/NA	Analysis	300.0		20	333953	12/06/16 18:52	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330919	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	331889	11/18/16 21:25	AJR	TAL PEN
Total Recoverable	Prep	3005A	DL		330919	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	DL	100	331889	11/18/16 21:30	AJR	TAL PEN
Total/NA	Prep	7470A			332972	11/29/16 12:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 14:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331207	11/15/16 16:26	TET	TAL PEN

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-130029-7**

**Date Collected: 11/10/16 13:50**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333139	11/30/16 19:15	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330919	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	331889	11/18/16 20:13	AJR	TAL PEN
Total/NA	Prep	7470A			332972	11/29/16 12:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 14:08	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331207	11/15/16 16:26	TET	TAL PEN

**Client Sample ID: WGWC-14**

**Lab Sample ID: 400-130029-8**

**Date Collected: 11/10/16 15:25**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333139	11/30/16 19:38	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330919	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	331889	11/18/16 20:18	AJR	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: WGWC-14**

**Lab Sample ID: 400-130029-8**

**Date Collected: 11/10/16 15:25**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			332972	11/29/16 12:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 14:09	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331207	11/15/16 16:26	TET	TAL PEN

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-130029-9**

**Date Collected: 11/10/16 16:25**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333139	11/30/16 20:01	TAJ	TAL PEN
Total/NA	Analysis	300.0		5	333953	12/06/16 19:38	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330919	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	331889	11/18/16 20:22	AJR	TAL PEN
Total/NA	Prep	7470A			332972	11/29/16 12:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 14:11	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331207	11/15/16 16:26	TET	TAL PEN

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-130029-10**

**Date Collected: 11/10/16 16:26**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333139	11/30/16 21:09	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330919	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	331889	11/18/16 20:27	AJR	TAL PEN
Total/NA	Prep	7470A			332972	11/29/16 12:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 14:12	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331207	11/15/16 16:26	TET	TAL PEN

**Client Sample ID: DUP-1**

**Lab Sample ID: 400-130029-11**

**Date Collected: 11/10/16 00:00**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333139	11/30/16 21:32	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330919	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	331889	11/18/16 21:21	AJR	TAL PEN
Total/NA	Prep	7470A			332972	11/29/16 12:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 14:23	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331207	11/15/16 16:26	TET	TAL PEN



# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-130029-12**

**Date Collected: 11/11/16 09:55**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333139	11/30/16 21:55	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330919	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	331889	11/18/16 20:54	AJR	TAL PEN
Total/NA	Prep	7470A			332972	11/29/16 12:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 14:24	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331377	11/16/16 17:01	RRC	TAL PEN

**Client Sample ID: FB-2**

**Lab Sample ID: 400-130029-13**

**Date Collected: 11/11/16 09:55**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333139	11/30/16 22:18	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330919	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332046	11/21/16 14:53	AJR	TAL PEN
Total/NA	Prep	7470A			332972	11/29/16 12:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 14:26	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331377	11/16/16 17:01	RRC	TAL PEN

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-130029-14**

**Date Collected: 11/11/16 10:00**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333139	11/30/16 22:41	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330919	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	331889	11/18/16 20:58	AJR	TAL PEN
Total/NA	Prep	7470A			332972	11/29/16 12:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 14:27	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331377	11/16/16 17:01	RRC	TAL PEN

**Client Sample ID: FERB-2**

**Lab Sample ID: 400-130029-15**

**Date Collected: 11/11/16 10:10**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333139	11/30/16 23:03	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330919	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	331889	11/18/16 21:03	AJR	TAL PEN
Total/NA	Prep	7470A			332972	11/29/16 12:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 14:28	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331377	11/16/16 17:01	RRC	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

**Client Sample ID: WGCW-12**

**Lab Sample ID: 400-130029-16**

**Date Collected: 11/11/16 12:15**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333261	12/01/16 00:35	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330919	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	331889	11/18/16 21:07	AJR	TAL PEN
Total/NA	Prep	7470A			332972	11/29/16 12:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 14:29	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331377	11/16/16 17:01	RRC	TAL PEN

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-130029-17**

**Date Collected: 11/11/16 12:20**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333261	12/01/16 02:29	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330919	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	331889	11/18/16 21:12	AJR	TAL PEN
Total/NA	Prep	7470A			332972	11/29/16 12:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 14:31	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331377	11/16/16 17:01	RRC	TAL PEN

**Client Sample ID: DUP-2**

**Lab Sample ID: 400-130029-18**

**Date Collected: 11/11/16 00:00**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333261	12/01/16 02:52	TAJ	TAL PEN
Total Recoverable	Prep	3005A			330919	11/14/16 12:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	331889	11/18/16 21:16	AJR	TAL PEN
Total/NA	Prep	7470A			332972	11/29/16 12:42	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 14:32	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331207	11/15/16 16:26	TET	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 Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

## HPLC/IC

### Analysis Batch: 333139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130029-1	WGWA-7	Total/NA	Water	300.0	
400-130029-2	FB-1	Total/NA	Water	300.0	
400-130029-3	FERB-1	Total/NA	Water	300.0	
400-130029-4	WGWA-3	Total/NA	Water	300.0	
400-130029-5	WGWA-4	Total/NA	Water	300.0	
400-130029-6	WGWC-16	Total/NA	Water	300.0	
400-130029-7	WGWC-17	Total/NA	Water	300.0	
400-130029-8	WGWC-14	Total/NA	Water	300.0	
400-130029-9	WGWC-15	Total/NA	Water	300.0	
400-130029-10	WGWC-13	Total/NA	Water	300.0	
400-130029-11	DUP-1	Total/NA	Water	300.0	
400-130029-12	WGWC-10	Total/NA	Water	300.0	
400-130029-13	FB-2	Total/NA	Water	300.0	
400-130029-14	WGWC-11	Total/NA	Water	300.0	
400-130029-15	FERB-2	Total/NA	Water	300.0	
MB 400-333139/3	Method Blank	Total/NA	Water	300.0	
LCS 400-333139/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-333139/5	Lab Control Sample Dup	Total/NA	Water	300.0	
400-130667-E-1 MS	Matrix Spike	Total/NA	Water	300.0	
400-130667-E-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 333261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130029-16	WGCW-12	Total/NA	Water	300.0	
400-130029-17	WGWC-19	Total/NA	Water	300.0	
400-130029-18	DUP-2	Total/NA	Water	300.0	
MB 400-333261/86	Method Blank	Total/NA	Water	300.0	
LCS 400-333261/87	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-333261/88	Lab Control Sample Dup	Total/NA	Water	300.0	
400-130029-16 MS	WGCW-12	Total/NA	Water	300.0	
400-130029-16 MSD	WGCW-12	Total/NA	Water	300.0	

### Analysis Batch: 333953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130029-6	WGWC-16	Total/NA	Water	300.0	
400-130029-9	WGWC-15	Total/NA	Water	300.0	
MB 400-333953/4	Method Blank	Total/NA	Water	300.0	
LCS 400-333953/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-333953/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-130301-A-3 MS	Matrix Spike	Total/NA	Water	300.0	
400-130301-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

## Metals

### Prep Batch: 330919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130029-1	WGWA-7	Total Recoverable	Water	3005A	
400-130029-2	FB-1	Total Recoverable	Water	3005A	
400-130029-3	FERB-1	Total Recoverable	Water	3005A	
400-130029-4	WGWA-3	Total Recoverable	Water	3005A	

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

## Metals (Continued)

### Prep Batch: 330919 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130029-5	WGWA-4	Total Recoverable	Water	3005A	
400-130029-6	WGWC-16	Total Recoverable	Water	3005A	
400-130029-6 - DL	WGWC-16	Total Recoverable	Water	3005A	
400-130029-7	WGWC-17	Total Recoverable	Water	3005A	
400-130029-8	WGWC-14	Total Recoverable	Water	3005A	
400-130029-9	WGWC-15	Total Recoverable	Water	3005A	
400-130029-10	WGWC-13	Total Recoverable	Water	3005A	
400-130029-11	DUP-1	Total Recoverable	Water	3005A	
400-130029-12	WGWC-10	Total Recoverable	Water	3005A	
400-130029-13	FB-2	Total Recoverable	Water	3005A	
400-130029-14	WGWC-11	Total Recoverable	Water	3005A	
400-130029-15	FERB-2	Total Recoverable	Water	3005A	
400-130029-16	WGCW-12	Total Recoverable	Water	3005A	
400-130029-17	WGWC-19	Total Recoverable	Water	3005A	
400-130029-18	DUP-2	Total Recoverable	Water	3005A	
MB 400-330919/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-330919/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-130029-4 MS	WGWA-3	Total Recoverable	Water	3005A	
400-130029-4 MSD	WGWA-3	Total Recoverable	Water	3005A	

### Analysis Batch: 331889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130029-1	WGWA-7	Total Recoverable	Water	6020	330919
400-130029-2	FB-1	Total Recoverable	Water	6020	330919
400-130029-3	FERB-1	Total Recoverable	Water	6020	330919
400-130029-4	WGWA-3	Total Recoverable	Water	6020	330919
400-130029-5	WGWA-4	Total Recoverable	Water	6020	330919
400-130029-6	WGWC-16	Total Recoverable	Water	6020	330919
400-130029-6 - DL	WGWC-16	Total Recoverable	Water	6020	330919
400-130029-7	WGWC-17	Total Recoverable	Water	6020	330919
400-130029-8	WGWC-14	Total Recoverable	Water	6020	330919
400-130029-9	WGWC-15	Total Recoverable	Water	6020	330919
400-130029-10	WGWC-13	Total Recoverable	Water	6020	330919
400-130029-11	DUP-1	Total Recoverable	Water	6020	330919
400-130029-12	WGWC-10	Total Recoverable	Water	6020	330919
400-130029-14	WGWC-11	Total Recoverable	Water	6020	330919
400-130029-15	FERB-2	Total Recoverable	Water	6020	330919
400-130029-16	WGCW-12	Total Recoverable	Water	6020	330919
400-130029-17	WGWC-19	Total Recoverable	Water	6020	330919
400-130029-18	DUP-2	Total Recoverable	Water	6020	330919
MB 400-330919/1-A ^5	Method Blank	Total Recoverable	Water	6020	330919
LCS 400-330919/2-A	Lab Control Sample	Total Recoverable	Water	6020	330919
400-130029-4 MS	WGWA-3	Total Recoverable	Water	6020	330919
400-130029-4 MSD	WGWA-3	Total Recoverable	Water	6020	330919

### Analysis Batch: 332046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130029-13	FB-2	Total Recoverable	Water	6020	330919

# QC Association Summary

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
 SDG: Ash Pond

## Metals (Continued)

### Prep Batch: 332972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130029-1	WGWA-7	Total/NA	Water	7470A	
400-130029-2	FB-1	Total/NA	Water	7470A	
400-130029-3	FERB-1	Total/NA	Water	7470A	
400-130029-4	WGWA-3	Total/NA	Water	7470A	
400-130029-5	WGWA-4	Total/NA	Water	7470A	
400-130029-6	WGWC-16	Total/NA	Water	7470A	
400-130029-7	WGWC-17	Total/NA	Water	7470A	
400-130029-8	WGWC-14	Total/NA	Water	7470A	
400-130029-9	WGWC-15	Total/NA	Water	7470A	
400-130029-10	WGWC-13	Total/NA	Water	7470A	
400-130029-11	DUP-1	Total/NA	Water	7470A	
400-130029-12	WGWC-10	Total/NA	Water	7470A	
400-130029-13	FB-2	Total/NA	Water	7470A	
400-130029-14	WGWC-11	Total/NA	Water	7470A	
400-130029-15	FERB-2	Total/NA	Water	7470A	
400-130029-16	WGCW-12	Total/NA	Water	7470A	
400-130029-17	WGWC-19	Total/NA	Water	7470A	
400-130029-18	DUP-2	Total/NA	Water	7470A	
MB 400-332972/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-332972/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-130029-1 MS	WGWA-7	Total/NA	Water	7470A	
400-130029-1 MSD	WGWA-7	Total/NA	Water	7470A	

### Analysis Batch: 333178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130029-1	WGWA-7	Total/NA	Water	7470A	332972
400-130029-2	FB-1	Total/NA	Water	7470A	332972
400-130029-3	FERB-1	Total/NA	Water	7470A	332972
400-130029-4	WGWA-3	Total/NA	Water	7470A	332972
400-130029-5	WGWA-4	Total/NA	Water	7470A	332972
400-130029-6	WGWC-16	Total/NA	Water	7470A	332972
400-130029-7	WGWC-17	Total/NA	Water	7470A	332972
400-130029-8	WGWC-14	Total/NA	Water	7470A	332972
400-130029-9	WGWC-15	Total/NA	Water	7470A	332972
400-130029-10	WGWC-13	Total/NA	Water	7470A	332972
400-130029-11	DUP-1	Total/NA	Water	7470A	332972
400-130029-12	WGWC-10	Total/NA	Water	7470A	332972
400-130029-13	FB-2	Total/NA	Water	7470A	332972
400-130029-14	WGWC-11	Total/NA	Water	7470A	332972
400-130029-15	FERB-2	Total/NA	Water	7470A	332972
400-130029-16	WGCW-12	Total/NA	Water	7470A	332972
400-130029-17	WGWC-19	Total/NA	Water	7470A	332972
400-130029-18	DUP-2	Total/NA	Water	7470A	332972
MB 400-332972/14-A	Method Blank	Total/NA	Water	7470A	332972
LCS 400-332972/15-A	Lab Control Sample	Total/NA	Water	7470A	332972
400-130029-1 MS	WGWA-7	Total/NA	Water	7470A	332972
400-130029-1 MSD	WGWA-7	Total/NA	Water	7470A	332972

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

## General Chemistry

### Analysis Batch: 331207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130029-1	WGWA-7	Total/NA	Water	SM 2540C	
400-130029-2	FB-1	Total/NA	Water	SM 2540C	
400-130029-3	FERB-1	Total/NA	Water	SM 2540C	
400-130029-4	WGWA-3	Total/NA	Water	SM 2540C	
400-130029-5	WGWA-4	Total/NA	Water	SM 2540C	
400-130029-6	WGWC-16	Total/NA	Water	SM 2540C	
400-130029-7	WGWC-17	Total/NA	Water	SM 2540C	
400-130029-8	WGWC-14	Total/NA	Water	SM 2540C	
400-130029-9	WGWC-15	Total/NA	Water	SM 2540C	
400-130029-10	WGWC-13	Total/NA	Water	SM 2540C	
400-130029-11	DUP-1	Total/NA	Water	SM 2540C	
400-130029-18	DUP-2	Total/NA	Water	SM 2540C	
MB 400-331207/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-331207/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-130029-6 DU	WGWC-16	Total/NA	Water	SM 2540C	

### Analysis Batch: 331377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130029-12	WGWC-10	Total/NA	Water	SM 2540C	
400-130029-13	FB-2	Total/NA	Water	SM 2540C	
400-130029-14	WGWC-11	Total/NA	Water	SM 2540C	
400-130029-15	FERB-2	Total/NA	Water	SM 2540C	
400-130029-16	WGCW-12	Total/NA	Water	SM 2540C	
400-130029-17	WGWC-19	Total/NA	Water	SM 2540C	
MB 400-331377/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-331377/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-130029-16 DU	WGCW-12	Total/NA	Water	SM 2540C	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 400-333139/3**  
**Matrix: Water**  
**Analysis Batch: 333139**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			11/30/16 11:41	1
Fluoride	<0.082		0.20	0.082	mg/L			11/30/16 11:41	1
Sulfate	<0.70		1.0	0.70	mg/L			11/30/16 11:41	1

**Lab Sample ID: LCS 400-333139/4**  
**Matrix: Water**  
**Analysis Batch: 333139**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.1		mg/L		101	90 - 110
Fluoride	10.0	9.78		mg/L		98	90 - 110
Sulfate	10.0	9.44		mg/L		94	90 - 110

**Lab Sample ID: LCSD 400-333139/5**  
**Matrix: Water**  
**Analysis Batch: 333139**

**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	10.0	10.1		mg/L		101	90 - 110	0	15
Fluoride	10.0	9.83		mg/L		98	90 - 110	1	15
Sulfate	10.0	9.43		mg/L		94	90 - 110	0	15

**Lab Sample ID: 400-130667-E-1 MS**  
**Matrix: Water**  
**Analysis Batch: 333139**

**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		10.0	13.0		mg/L		102	80 - 120
Fluoride	0.14	J	10.0	9.75		mg/L		96	80 - 120
Sulfate	6.4		10.0	16.5		mg/L		101	80 - 120

**Lab Sample ID: 400-130667-E-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 333139**

**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		10.0	12.9		mg/L		101	80 - 120	0	20
Fluoride	0.14	J	10.0	9.91		mg/L		98	80 - 120	2	20
Sulfate	6.4		10.0	16.5		mg/L		101	80 - 120	0	20

**Lab Sample ID: MB 400-333261/86**  
**Matrix: Water**  
**Analysis Batch: 333261**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			11/30/16 23:26	1
Fluoride	<0.082		0.20	0.082	mg/L			11/30/16 23:26	1
Sulfate	<0.70		1.0	0.70	mg/L			11/30/16 23:26	1

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 400-333261/87**  
**Matrix: Water**  
**Analysis Batch: 333261**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.96		mg/L		100	90 - 110
Fluoride	10.0	9.63		mg/L		96	90 - 110
Sulfate	10.0	9.46		mg/L		95	90 - 110

**Lab Sample ID: LCSD 400-333261/88**  
**Matrix: Water**  
**Analysis Batch: 333261**

**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	10.0	10.2		mg/L		102	90 - 110	2	15
Fluoride	10.0	9.68		mg/L		97	90 - 110	1	15
Sulfate	10.0	9.78		mg/L		98	90 - 110	3	15

**Lab Sample ID: 400-130029-16 MS**  
**Matrix: Water**  
**Analysis Batch: 333261**

**Client Sample ID: WGCW-12**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	3.5		10.0	14.0		mg/L		105	80 - 120
Fluoride	<0.082		10.0	10.3		mg/L		103	80 - 120
Sulfate	14		10.0	24.6		mg/L		105	80 - 120

**Lab Sample ID: 400-130029-16 MSD**  
**Matrix: Water**  
**Analysis Batch: 333261**

**Client Sample ID: WGCW-12**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	3.5		10.0	14.0		mg/L		105	80 - 120	0	20
Fluoride	<0.082		10.0	10.2		mg/L		102	80 - 120	1	20
Sulfate	14		10.0	24.6		mg/L		105	80 - 120	0	20

**Lab Sample ID: MB 400-333953/4**  
**Matrix: Water**  
**Analysis Batch: 333953**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			12/06/16 11:55	1
Fluoride	<0.082		0.20	0.082	mg/L			12/06/16 11:55	1
Sulfate	<0.70		1.0	0.70	mg/L			12/06/16 11:55	1

**Lab Sample ID: LCS 400-333953/5**  
**Matrix: Water**  
**Analysis Batch: 333953**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.1		mg/L		101	90 - 110
Fluoride	10.0	10.4		mg/L		104	90 - 110
Sulfate	10.0	10.6		mg/L		106	90 - 110

TestAmerica Pensacola



# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCSD 400-333953/6**  
**Matrix: Water**  
**Analysis Batch: 333953**

**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	10.0	10.2		mg/L		102	90 - 110	1	15
Fluoride	10.0	11.1	*	mg/L		111	90 - 110	7	15
Sulfate	10.0	10.5		mg/L		105	90 - 110	2	15

**Lab Sample ID: 400-130301-A-3 MS**  
**Matrix: Water**  
**Analysis Batch: 333953**

**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	31		50.0	78.4		mg/L		95	80 - 120		
Fluoride	<0.41	*	50.0	52.2		mg/L		104	80 - 120		
Sulfate	89		50.0	139		mg/L		100	80 - 120		

**Lab Sample ID: 400-130301-A-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 333953**

**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	31		50.0	78.6		mg/L		95	80 - 120	0	20
Fluoride	<0.41	*	50.0	56.1		mg/L		112	80 - 120	7	20
Sulfate	89		50.0	139		mg/L		99	80 - 120	0	20

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

**Lab Sample ID: MB 400-330919/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 331889**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 330919**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/14/16 12:00	11/18/16 18:52	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/14/16 12:00	11/18/16 18:52	5
Barium	<0.00049		0.0025	0.00049	mg/L		11/14/16 12:00	11/18/16 18:52	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 18:52	5
Boron	<0.021		0.050	0.021	mg/L		11/14/16 12:00	11/18/16 18:52	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/14/16 12:00	11/18/16 18:52	5
Calcium	<0.13		0.25	0.13	mg/L		11/14/16 12:00	11/18/16 18:52	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		11/14/16 12:00	11/18/16 18:52	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/14/16 12:00	11/18/16 18:52	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/14/16 12:00	11/18/16 18:52	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/14/16 12:00	11/18/16 18:52	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/14/16 12:00	11/18/16 18:52	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/14/16 12:00	11/18/16 18:52	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/14/16 12:00	11/18/16 18:52	5

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

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

**Lab Sample ID: LCS 400-330919/2-A**  
**Matrix: Water**  
**Analysis Batch: 331889**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 330919**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0526		mg/L		105	80 - 120
Arsenic	0.0500	0.0539		mg/L		108	80 - 120
Barium	0.0500	0.0511		mg/L		102	80 - 120
Beryllium	0.0500	0.0508		mg/L		102	80 - 120
Boron	0.100	0.103		mg/L		103	80 - 120
Cadmium	0.0500	0.0509		mg/L		102	80 - 120
Calcium	5.00	4.94		mg/L		99	80 - 120
Chromium	0.0500	0.0500	^	mg/L		100	80 - 120
Cobalt	0.0500	0.0511		mg/L		102	80 - 120
Lead	0.0500	0.0504		mg/L		101	80 - 120
Lithium	0.0500	0.0533		mg/L		107	80 - 120
Molybdenum	0.0500	0.0499		mg/L		100	80 - 120
Selenium	0.0500	0.0517		mg/L		103	80 - 120
Thallium	0.0100	0.0102		mg/L		102	80 - 120

**Lab Sample ID: 400-130029-4 MS**  
**Matrix: Water**  
**Analysis Batch: 331889**

**Client Sample ID: WGWA-3**  
**Prep Type: Total Recoverable**  
**Prep Batch: 330919**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0535		mg/L		107	75 - 125
Arsenic	<0.00046		0.0500	0.0540		mg/L		108	75 - 125
Barium	0.013		0.0500	0.0660		mg/L		105	75 - 125
Beryllium	<0.00034		0.0500	0.0520		mg/L		104	75 - 125
Boron	<0.021		0.100	0.111		mg/L		111	75 - 125
Cadmium	<0.00034		0.0500	0.0506		mg/L		101	75 - 125
Calcium	1.6		5.00	6.46		mg/L		97	75 - 125
Chromium	<0.0011	^	0.0500	0.0513	^	mg/L		103	75 - 125
Cobalt	<0.00040		0.0500	0.0517		mg/L		103	75 - 125
Lead	<0.00035		0.0500	0.0506		mg/L		101	75 - 125
Lithium	<0.0032		0.0500	0.0559		mg/L		112	75 - 125
Molybdenum	<0.00085		0.0500	0.0502		mg/L		100	75 - 125
Selenium	<0.00024		0.0500	0.0502		mg/L		100	75 - 125
Thallium	<0.00085		0.0100	0.0103		mg/L		103	75 - 125

**Lab Sample ID: 400-130029-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 331889**

**Client Sample ID: WGWA-3**  
**Prep Type: Total Recoverable**  
**Prep Batch: 330919**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0522		mg/L		104	75 - 125	2	20
Arsenic	<0.00046		0.0500	0.0545		mg/L		109	75 - 125	1	20
Barium	0.013		0.0500	0.0641		mg/L		102	75 - 125	3	20
Beryllium	<0.00034		0.0500	0.0515		mg/L		103	75 - 125	1	20
Boron	<0.021		0.100	0.103		mg/L		103	75 - 125	7	20
Cadmium	<0.00034		0.0500	0.0496		mg/L		99	75 - 125	2	20
Calcium	1.6		5.00	6.53		mg/L		98	75 - 125	1	20
Chromium	<0.0011	^	0.0500	0.0514	^	mg/L		103	75 - 125	0	20

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

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

**Lab Sample ID: 400-130029-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 331889**

**Client Sample ID: WGWA-3**  
**Prep Type: Total Recoverable**  
**Prep Batch: 330919**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Cobalt	<0.00040		0.0500	0.0514		mg/L		103	75 - 125	1	20
Lead	<0.00035		0.0500	0.0502		mg/L		100	75 - 125	1	20
Lithium	<0.0032		0.0500	0.0550		mg/L		110	75 - 125	2	20
Molybdenum	<0.00085		0.0500	0.0476		mg/L		95	75 - 125	5	20
Selenium	<0.00024		0.0500	0.0517		mg/L		103	75 - 125	3	20
Thallium	<0.000085		0.0100	0.0103		mg/L		103	75 - 125	0	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 400-332972/14-A**  
**Matrix: Water**  
**Analysis Batch: 333178**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 332972**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.000138	J	0.00020	0.000070	mg/L		11/29/16 12:39	11/30/16 13:39	1

**Lab Sample ID: LCS 400-332972/15-A**  
**Matrix: Water**  
**Analysis Batch: 333178**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 332972**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Mercury	0.00101	0.00101		mg/L		100	80 - 120

**Lab Sample ID: 400-130029-1 MS**  
**Matrix: Water**  
**Analysis Batch: 333178**

**Client Sample ID: WGWA-7**  
**Prep Type: Total/NA**  
**Prep Batch: 332972**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier		Result	Qualifier				Limits
Mercury	0.000087	J B	0.00201	0.00187		mg/L		88	80 - 120

**Lab Sample ID: 400-130029-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 333178**

**Client Sample ID: WGWA-7**  
**Prep Type: Total/NA**  
**Prep Batch: 332972**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Mercury	0.000087	J B	0.00201	0.00198		mg/L		94	80 - 120	6	20

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

**Lab Sample ID: MB 400-331207/1**  
**Matrix: Water**  
**Analysis Batch: 331207**

**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			11/15/16 16:26	1

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-1  
 SDG: Ash Pond

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

**Lab Sample ID: LCS 400-331207/2**  
**Matrix: Water**  
**Analysis Batch: 331207**

**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: 400-130029-6 DU**  
**Matrix: Water**  
**Analysis Batch: 331207**

**Client Sample ID: WGWC-16**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1400		1360		mg/L		0.1	5

**Lab Sample ID: MB 400-331377/1**  
**Matrix: Water**  
**Analysis Batch: 331377**

**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			11/16/16 17:01	1

**Lab Sample ID: LCS 400-331377/2**  
**Matrix: Water**  
**Analysis Batch: 331377**

**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: 400-130029-16 DU**  
**Matrix: Water**  
**Analysis Batch: 331377**

**Client Sample ID: WGCW-12**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	100		104		mg/L		0	5



### Chain of Custody Record

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

**Client Information**  
 Client Contact: Cayce Hurdelle C. Hill, Virgo W.V.  
 Joju Abraham  
 Lab PM: Whitmire, Cheyenne R.  
 E-Mail: cheyenne.whitmire@testamericainc.com  
 Carrier Tracking No(s):  
 Page: 1 of 1  
 Job #:

**Company:** Southern Company  
**Address:** 241 Ralph McGill Blvd SE B10185  
**City:** Atlanta  
**State:** GA **Zip:** 30308  
**Phone:** 404-506-7239  
**Email:** JAbraham@southernco.com  
**Project Name:** Plant Wansley - Ash Pond  
**Site:** CCR

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=overhead, EP=effluent, AW=air)	Analysis Requested		Special Instructions/Note:
					Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	
WGWA-7	11/10/16	0900	G	W	N	1	3
FB-1	11/10/16	0910	G	W	N	1	3
FERB-1	11/10/16	0940	G	W	N	1	3
WGWA-3	11/10/16	0925	G	W	N	1	3
WGWA-4	11/10/16	1110	G	W	N	1	3
WGWC-16	11/10/16	1255	G	W	N	1	3
WGWC-17	11/10/16	1350	G	W	N	1	3
WGWC-14	11/10/16	1525	G	W	N	1	3
WGWC-15	11/10/16	1625	G	W	N	1	3
WGWC-13	11/10/16	1626	G	W	N	1	3
DUP-1	11/10/16	-	G	W	N	1	3

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)

**Empty Kit Relinquished by:** \_\_\_\_\_  
**Relinquished by:** Will King  
**Relinquished by:** \_\_\_\_\_  
**Relinquished by:** \_\_\_\_\_  
 Date: 11/11/16 1440  
 Date: 11/11/16 1530  
 Date: \_\_\_\_\_  
 Company: ERM  
 Company: VTA  
 Company: \_\_\_\_\_  
 Received by: \_\_\_\_\_  
 Received by: \_\_\_\_\_  
 Received by: \_\_\_\_\_  
 Date/Time: 11-11-16 1440  
 Date/Time: 11/12/16 0850  
 Date/Time: \_\_\_\_\_  
 Method of Shipment: \_\_\_\_\_  
 Special Instructions/QC Requirements: please cc: Maria Padilla and Heath McCorkle on results  
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months  
 Cooler Temperature(s) °C and/or other Remarks: 3.2°C, 1.7°C, 2.2°C, JRC6

Customer Seal No.: 745946, 745960	Cooler Temperature(s) °C and/or other Remarks: 3.2°C, 1.7°C, 2.2°C, JRC6
Custody Seals Intact: Yes Δ No	



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

**Chain of Custody Record**

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING

**Client Information**  
 Client Contact: JoLu Abraham  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

**Lab PM:** Whitmire, Cheyenne R  
**Carrier Tracking No(s):**  
**Page:** 1 of 1  
**Job #:**

**Due Date Requested:**  
**TAT Requested (days):**  
**PO #:**  
**WO #:**  
**Project #:**  
**SSOW#:**

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, B=bottoms, A=air)	Field Filtered Sample (Yes or No)	Pattern/MS/SD (Yes or No)	Analysis Requested				Special Instructions/Note:
							TDS - SM 2540C: Cl, F, SO4 - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320	Total Number of Containers	
WGWC-10	11/11/16	0955	G	W	N	X	1	1	1	3	
FB-2	11/11/16	0955	G	W	N		1	1	1	3	
WGWC-11	11/11/16	1000	G	W	N		1	1	1	3	
FERB-2	11/11/16	1010	G	W	N		1	1	1	3	
WGWC-12	11/11/16	1215	G	W	N		1	1	1	3	
WGWC-19	11/11/16	1220	G	W	N		1	1	1	3	
DUP-2	11/11/16	-	G	W	N		1	1	1	3	

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological

**Deliverable Requested:** I, II, III, IV, Other (specify)

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Special Instructions/QC Requirements: please cc: Maria Padilla and Heath McConkie on results

**Empty Kit Relinquished by:** \_\_\_\_\_ Date: \_\_\_\_\_  
**Relinquished by:** Will Virgo Date: 11/11/16 1440 Company: ERM  
**Relinquished by:** \_\_\_\_\_ Date: 11/11/16 1530 Company: \_\_\_\_\_  
**Relinquished by:** \_\_\_\_\_ Date: \_\_\_\_\_ Company: \_\_\_\_\_

Cooler Temperature(s) °C and Other Remarks: 3.2°C, 1.7°C, 2.2°C 12-6



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-130029-1

SDG Number: Ash Pond

**Login Number: 130029**

**List Number: 1**

**Creator: Perez, Trina M**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	745945, 745946, 745960
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	3.2°C, 1.7°C, 2.2°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 Wansley

TestAmerica Job ID: 400-130029-1  
SDG: Ash Pond

## Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP Secondary AB	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-16
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17



# 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: 400-130029-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Plant Wansley

For:

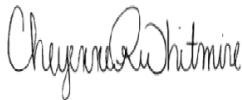
Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

12/29/2016 7:58:16 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

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

### LINKS

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Have a Question?



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

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

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

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# Case Narrative

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Job ID: 400-130029-2**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-130029-2

#### RAD

Method(s) PrecSep\_0: Radium-228 Prep Batch 160-279822: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: WGWA-7 (400-130029-1), FB-1 (400-130029-2), FERB-1 (400-130029-3), WGWA-3 (400-130029-4), WGWA-4 (400-130029-5), WGWC-16 (400-130029-6), WGWC-17 (400-130029-7), WGWC-14 (400-130029-8), WGWC-15 (400-130029-9), WGWC-13 (400-130029-10), DUP-1 (400-130029-11), WGWC-10 (400-130029-12), FB-2 (400-130029-13), WGWC-11 (400-130029-14), FERB-2 (400-130029-15), WGCW-12 (400-130029-16), WGWC-19 (400-130029-17) and DUP-2 (400-130029-18). 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 160-279775: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: WGWA-7 (400-130029-1), FB-1 (400-130029-2), FERB-1 (400-130029-3), WGWA-3 (400-130029-4), WGWA-4 (400-130029-5), WGWC-16 (400-130029-6), WGWC-17 (400-130029-7), WGWC-14 (400-130029-8), WGWC-15 (400-130029-9), WGWC-13 (400-130029-10), DUP-1 (400-130029-11), WGWC-10 (400-130029-12), FB-2 (400-130029-13), WGWC-11 (400-130029-14), FERB-2 (400-130029-15), WGCW-12 (400-130029-16), WGWC-19 (400-130029-17) and DUP-2 (400-130029-18). 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 Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

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 Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-130029-1	WGWA-7	Water	11/10/16 09:00	11/12/16 08:50
400-130029-2	FB-1	Water	11/10/16 09:10	11/12/16 08:50
400-130029-3	FERB-1	Water	11/10/16 09:40	11/12/16 08:50
400-130029-4	WGWA-3	Water	11/10/16 09:25	11/12/16 08:50
400-130029-5	WGWA-4	Water	11/10/16 11:10	11/12/16 08:50
400-130029-6	WGWC-16	Water	11/10/16 12:55	11/12/16 08:50
400-130029-7	WGWC-17	Water	11/10/16 13:50	11/12/16 08:50
400-130029-8	WGWC-14	Water	11/10/16 15:25	11/12/16 08:50
400-130029-9	WGWC-15	Water	11/10/16 16:25	11/12/16 08:50
400-130029-10	WGWC-13	Water	11/10/16 16:26	11/12/16 08:50
400-130029-11	DUP-1	Water	11/10/16 00:00	11/12/16 08:50
400-130029-12	WGWC-10	Water	11/11/16 09:55	11/12/16 08:50
400-130029-13	FB-2	Water	11/11/16 09:55	11/12/16 08:50
400-130029-14	WGWC-11	Water	11/11/16 10:00	11/12/16 08:50
400-130029-15	FERB-2	Water	11/11/16 10:10	11/12/16 08:50
400-130029-16	WGCW-12	Water	11/11/16 12:15	11/12/16 08:50
400-130029-17	WGWC-19	Water	11/11/16 12:20	11/12/16 08:50
400-130029-18	DUP-2	Water	11/11/16 00:00	11/12/16 08:50

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: WGWA-7**

**Date Collected: 11/10/16 09:00**

**Date Received: 11/12/16 08:50**

**Lab Sample ID: 400-130029-1**

**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	0.361	U	0.258	0.260	1.00	0.372	pCi/L	11/17/16 10:29	12/17/16 12:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.9		40 - 110					11/17/16 10:29	12/17/16 12:06	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.510		0.251	0.256	1.00	0.363	pCi/L	11/17/16 11:12	12/16/16 13:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.9		40 - 110					11/17/16 11:12	12/16/16 13:30	1
Y Carrier	98.3		40 - 110					11/17/16 11:12	12/16/16 13:30	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.871		0.360	0.365	5.00	0.372	pCi/L		12/20/16 14:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: FB-1**  
**Date Collected: 11/10/16 09:10**  
**Date Received: 11/12/16 08:50**

**Lab Sample ID: 400-130029-2**  
**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	-0.00431	U	0.150	0.150	1.00	0.313	pCi/L	11/17/16 10:29	12/17/16 12:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.5		40 - 110					11/17/16 10:29	12/17/16 12:06	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0683	U	0.229	0.229	1.00	0.401	pCi/L	11/17/16 11:12	12/16/16 13:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.5		40 - 110					11/17/16 11:12	12/16/16 13:30	1
Y Carrier	93.5		40 - 110					11/17/16 11:12	12/16/16 13:30	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0640	U	0.274	0.274	5.00	0.401	pCi/L		12/20/16 14:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: FERB-1**

**Date Collected: 11/10/16 09:40**

**Date Received: 11/12/16 08:50**

**Lab Sample ID: 400-130029-3**

**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	0.160	U	0.197	0.198	1.00	0.324	pCi/L	11/17/16 10:29	12/17/16 12:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	73.5		40 - 110					11/17/16 10:29	12/17/16 12:07	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.175	U	0.307	0.307	1.00	0.522	pCi/L	11/17/16 11:12	12/16/16 13:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	73.5		40 - 110					11/17/16 11:12	12/16/16 13:30	1
Y Carrier	74.0		40 - 110					11/17/16 11:12	12/16/16 13:30	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.335	U	0.365	0.365	5.00	0.522	pCi/L		12/20/16 14:26	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: WGWA-3**

**Lab Sample ID: 400-130029-4**

**Date Collected: 11/10/16 09:25**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.255	U	0.209	0.210	1.00	0.310	pCi/L	11/17/16 10:29	12/17/16 11:55	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					11/17/16 10:29	12/17/16 11:55	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.166	U	0.220	0.221	1.00	0.366	pCi/L	11/17/16 11:12	12/16/16 13:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					11/17/16 11:12	12/16/16 13:29	1
Y Carrier	92.0		40 - 110					11/17/16 11:12	12/16/16 13:29	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Combined Radium 226 + 228</b>	<b>0.421</b>		0.303	0.305	5.00	0.366	pCi/L		12/20/16 14:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-130029-5**

**Date Collected: 11/10/16 11:10**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.408		0.245	0.248	1.00	0.330	pCi/L	11/17/16 10:29	12/17/16 11:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.8		40 - 110					11/17/16 10:29	12/17/16 11:56	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.721		0.300	0.308	1.00	0.428	pCi/L	11/17/16 11:12	12/16/16 13:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.8		40 - 110					11/17/16 11:12	12/16/16 13:42	1
Y Carrier	90.1		40 - 110					11/17/16 11:12	12/16/16 13:42	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.13		0.388	0.395	5.00	0.428	pCi/L		12/20/16 14:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-130029-6**

**Date Collected: 11/10/16 12:55**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.01		0.342	0.354	1.00	0.315	pCi/L	11/17/16 10:29	12/17/16 11:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.5		40 - 110					11/17/16 10:29	12/17/16 11:56	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.86		0.391	0.427	1.00	0.445	pCi/L	11/17/16 11:12	12/16/16 13:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.5		40 - 110					11/17/16 11:12	12/16/16 13:42	1
Y Carrier	94.6		40 - 110					11/17/16 11:12	12/16/16 13:42	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.87		0.519	0.554	5.00	0.445	pCi/L		12/20/16 14:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-130029-7**

**Date Collected: 11/10/16 13:50**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.149	U	0.189	0.190	1.00	0.314	pCi/L	11/17/16 10:29	12/17/16 11:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.6		40 - 110					11/17/16 10:29	12/17/16 11:56	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.282	U	0.266	0.267	1.00	0.429	pCi/L	11/17/16 11:12	12/16/16 13:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.6		40 - 110					11/17/16 11:12	12/16/16 13:42	1
Y Carrier	91.2		40 - 110					11/17/16 11:12	12/16/16 13:42	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Combined Radium 226 + 228</b>	<b>0.431</b>		0.326	0.327	5.00	0.429	pCi/L		12/20/16 14:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: WGWC-14**

**Lab Sample ID: 400-130029-8**

**Date Collected: 11/10/16 15:25**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.514		0.252	0.256	1.00	0.299	pCi/L	11/17/16 10:29	12/17/16 11:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.2		40 - 110					11/17/16 10:29	12/17/16 11:56	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.577		0.292	0.297	1.00	0.437	pCi/L	11/17/16 11:12	12/16/16 13:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.2		40 - 110					11/17/16 11:12	12/16/16 13:42	1
Y Carrier	92.0		40 - 110					11/17/16 11:12	12/16/16 13:42	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.09		0.385	0.392	5.00	0.437	pCi/L		12/20/16 14:26	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
 SDG: Ash Pond

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-130029-9**

**Date Collected: 11/10/16 16:25**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.200	U	0.240	0.241	1.00	0.395	pCi/L	11/17/16 10:29	12/17/16 11:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.6		40 - 110					11/17/16 10:29	12/17/16 11:56	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.510		0.300	0.304	1.00	0.456	pCi/L	11/17/16 11:12	12/16/16 13:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.6		40 - 110					11/17/16 11:12	12/16/16 13:42	1
Y Carrier	89.0		40 - 110					11/17/16 11:12	12/16/16 13:42	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.709		0.384	0.387	5.00	0.456	pCi/L		12/20/16 14:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-130029-10**

**Date Collected: 11/10/16 16:26**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.462		0.249	0.252	1.00	0.306	pCi/L	11/17/16 10:29	12/17/16 11:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.3		40 - 110					11/17/16 10:29	12/17/16 11:56	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.541		0.268	0.273	1.00	0.392	pCi/L	11/17/16 11:12	12/16/16 13:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.3		40 - 110					11/17/16 11:12	12/16/16 13:42	1
Y Carrier	93.1		40 - 110					11/17/16 11:12	12/16/16 13:42	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.00		0.366	0.372	5.00	0.392	pCi/L		12/20/16 14:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: DUP-1**

**Date Collected: 11/10/16 00:00**

**Date Received: 11/12/16 08:50**

**Lab Sample ID: 400-130029-11**

**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	0.207	U	0.220	0.221	1.00	0.352	pCi/L	11/17/16 10:29	12/17/16 11:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					11/17/16 10:29	12/17/16 11:56	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.130	U	0.250	0.250	1.00	0.426	pCi/L	11/17/16 11:12	12/16/16 13:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					11/17/16 11:12	12/16/16 13:42	1
Y Carrier	89.3		40 - 110					11/17/16 11:12	12/16/16 13:42	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.337	U	0.333	0.334	5.00	0.426	pCi/L		12/20/16 14:26	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-130029-12**

**Date Collected: 11/11/16 09:55**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.583		0.266	0.271	1.00	0.311	pCi/L	11/17/16 10:29	12/17/16 14:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110					11/17/16 10:29	12/17/16 14:11	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0410	U	0.210	0.210	1.00	0.387	pCi/L	11/17/16 11:12	12/16/16 13:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110					11/17/16 11:12	12/16/16 13:42	1
Y Carrier	92.0		40 - 110					11/17/16 11:12	12/16/16 13:42	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.542		0.339	0.343	5.00	0.387	pCi/L		12/20/16 14:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: FB-2**

**Lab Sample ID: 400-130029-13**

**Date Collected: 11/11/16 09:55**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0641	U	0.141	0.141	1.00	0.320	pCi/L	11/17/16 10:29	12/17/16 14:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.8		40 - 110					11/17/16 10:29	12/17/16 14:11	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.370	U	0.252	0.255	1.00	0.391	pCi/L	11/17/16 11:12	12/16/16 13:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.8		40 - 110					11/17/16 11:12	12/16/16 13:42	1
Y Carrier	94.6		40 - 110					11/17/16 11:12	12/16/16 13:42	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.306	U	0.289	0.291	5.00	0.391	pCi/L		12/20/16 14:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-130029-14**

**Date Collected: 11/11/16 10:00**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.256	U	0.201	0.203	1.00	0.288	pCi/L	11/17/16 10:29	12/17/16 14:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.1		40 - 110					11/17/16 10:29	12/17/16 14:11	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.230	U	0.193	0.194	1.00	0.395	pCi/L	11/17/16 11:12	12/16/16 13:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.1		40 - 110					11/17/16 11:12	12/16/16 13:41	1
Y Carrier	90.8		40 - 110					11/17/16 11:12	12/16/16 13:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0257	U	0.279	0.281	5.00	0.395	pCi/L		12/20/16 14:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: FERB-2**

**Date Collected: 11/11/16 10:10**

**Date Received: 11/12/16 08:50**

**Lab Sample ID: 400-130029-15**

**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	U	0.191	0.191	1.00	0.301	pCi/L	11/17/16 10:29	12/17/16 14:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					11/17/16 10:29	12/17/16 14:11	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.309	U	0.241	0.242	1.00	0.379	pCi/L	11/17/16 11:12	12/16/16 13:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.0		40 - 110					11/17/16 11:12	12/16/16 13:41	1
Y Carrier	93.8		40 - 110					11/17/16 11:12	12/16/16 13:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.493		0.307	0.309	5.00	0.379	pCi/L		12/20/16 14:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: WGCW-12**

**Lab Sample ID: 400-130029-16**

Date Collected: 11/11/16 12:15

Matrix: Water

Date Received: 11/12/16 08:50

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.376		0.231	0.233	1.00	0.305	pCi/L	11/17/16 10:29	12/17/16 14:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.5		40 - 110					11/17/16 10:29	12/17/16 14:11	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0909	U	0.246	0.246	1.00	0.425	pCi/L	11/17/16 11:12	12/16/16 13:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.5		40 - 110					11/17/16 11:12	12/16/16 13:41	1
Y Carrier	91.6		40 - 110					11/17/16 11:12	12/16/16 13:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.467		0.337	0.339	5.00	0.425	pCi/L		12/20/16 14:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-130029-17**

**Date Collected: 11/11/16 12:20**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0873	U	0.212	0.213	1.00	0.383	pCi/L	11/17/16 10:29	12/17/16 14:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.6		40 - 110					11/17/16 10:29	12/17/16 14:11	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.197	U	0.196	0.197	1.00	0.396	pCi/L	11/17/16 11:12	12/16/16 13:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.6		40 - 110					11/17/16 11:12	12/16/16 13:41	1
Y Carrier	90.8		40 - 110					11/17/16 11:12	12/16/16 13:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.110	U	0.289	0.290	5.00	0.396	pCi/L		12/20/16 14:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: DUP-2**  
**Date Collected: 11/11/16 00:00**  
**Date Received: 11/12/16 08:50**

**Lab Sample ID: 400-130029-18**  
**Matrix: Water**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.488		0.247	0.251	1.00	0.295	pCi/L	11/17/16 10:29	12/17/16 14:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					11/17/16 10:29	12/17/16 14:11	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.460		0.241	0.245	1.00	0.352	pCi/L	11/17/16 11:12	12/16/16 13:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					11/17/16 11:12	12/16/16 13:41	1
Y Carrier	93.5		40 - 110					11/17/16 11:12	12/16/16 13:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.948		0.346	0.351	5.00	0.352	pCi/L		12/20/16 14:26	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

## 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 Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: WGWA-7**

**Date Collected: 11/10/16 09:00**

**Date Received: 11/12/16 08:50**

**Lab Sample ID: 400-130029-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279775	11/17/16 10:29	AS	TAL SL
Total/NA	Analysis	9315		1	284402	12/17/16 12:06	RTM	TAL SL
Total/NA	Prep	PrecSep_0			279777	11/17/16 11:12	AS	TAL SL
Total/NA	Analysis	9320		1	284170	12/16/16 13:30	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284751	12/20/16 14:26	CAH	TAL SL

**Client Sample ID: FB-1**

**Date Collected: 11/10/16 09:10**

**Date Received: 11/12/16 08:50**

**Lab Sample ID: 400-130029-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279775	11/17/16 10:29	AS	TAL SL
Total/NA	Analysis	9315		1	284402	12/17/16 12:06	RTM	TAL SL
Total/NA	Prep	PrecSep_0			279777	11/17/16 11:12	AS	TAL SL
Total/NA	Analysis	9320		1	284170	12/16/16 13:30	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284751	12/20/16 14:26	CAH	TAL SL

**Client Sample ID: FERB-1**

**Date Collected: 11/10/16 09:40**

**Date Received: 11/12/16 08:50**

**Lab Sample ID: 400-130029-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279775	11/17/16 10:29	AS	TAL SL
Total/NA	Analysis	9315		1	284402	12/17/16 12:07	RTM	TAL SL
Total/NA	Prep	PrecSep_0			279777	11/17/16 11:12	AS	TAL SL
Total/NA	Analysis	9320		1	284170	12/16/16 13:30	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284751	12/20/16 14:26	CAH	TAL SL

**Client Sample ID: WGWA-3**

**Date Collected: 11/10/16 09:25**

**Date Received: 11/12/16 08:50**

**Lab Sample ID: 400-130029-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279775	11/17/16 10:29	AS	TAL SL
Total/NA	Analysis	9315		1	284403	12/17/16 11:55	MLK	TAL SL
Total/NA	Prep	PrecSep_0			279777	11/17/16 11:12	AS	TAL SL
Total/NA	Analysis	9320		1	284170	12/16/16 13:29	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284751	12/20/16 14:26	CAH	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-130029-5**

**Date Collected: 11/10/16 11:10**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279775	11/17/16 10:29	AS	TAL SL
Total/NA	Analysis	9315		1	284403	12/17/16 11:56	MLK	TAL SL
Total/NA	Prep	PrecSep_0			279777	11/17/16 11:12	AS	TAL SL
Total/NA	Analysis	9320		1	284171	12/16/16 13:42	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284751	12/20/16 14:26	CAH	TAL SL

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-130029-6**

**Date Collected: 11/10/16 12:55**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279775	11/17/16 10:29	AS	TAL SL
Total/NA	Analysis	9315		1	284403	12/17/16 11:56	MLK	TAL SL
Total/NA	Prep	PrecSep_0			279777	11/17/16 11:12	AS	TAL SL
Total/NA	Analysis	9320		1	284171	12/16/16 13:42	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284751	12/20/16 14:26	CAH	TAL SL

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-130029-7**

**Date Collected: 11/10/16 13:50**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279775	11/17/16 10:29	AS	TAL SL
Total/NA	Analysis	9315		1	284403	12/17/16 11:56	MLK	TAL SL
Total/NA	Prep	PrecSep_0			279777	11/17/16 11:12	AS	TAL SL
Total/NA	Analysis	9320		1	284171	12/16/16 13:42	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284751	12/20/16 14:26	CAH	TAL SL

**Client Sample ID: WGWC-14**

**Lab Sample ID: 400-130029-8**

**Date Collected: 11/10/16 15:25**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279775	11/17/16 10:29	AS	TAL SL
Total/NA	Analysis	9315		1	284403	12/17/16 11:56	MLK	TAL SL
Total/NA	Prep	PrecSep_0			279777	11/17/16 11:12	AS	TAL SL
Total/NA	Analysis	9320		1	284171	12/16/16 13:42	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284751	12/20/16 14:26	CAH	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-130029-9**

**Date Collected: 11/10/16 16:25**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279775	11/17/16 10:29	AS	TAL SL
Total/NA	Analysis	9315		1	284403	12/17/16 11:56	MLK	TAL SL
Total/NA	Prep	PrecSep_0			279777	11/17/16 11:12	AS	TAL SL
Total/NA	Analysis	9320		1	284171	12/16/16 13:42	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284751	12/20/16 14:26	CAH	TAL SL

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-130029-10**

**Date Collected: 11/10/16 16:26**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279775	11/17/16 10:29	AS	TAL SL
Total/NA	Analysis	9315		1	284403	12/17/16 11:56	MLK	TAL SL
Total/NA	Prep	PrecSep_0			279777	11/17/16 11:12	AS	TAL SL
Total/NA	Analysis	9320		1	284171	12/16/16 13:42	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284751	12/20/16 14:26	CAH	TAL SL

**Client Sample ID: DUP-1**

**Lab Sample ID: 400-130029-11**

**Date Collected: 11/10/16 00:00**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279775	11/17/16 10:29	AS	TAL SL
Total/NA	Analysis	9315		1	284403	12/17/16 11:56	MLK	TAL SL
Total/NA	Prep	PrecSep_0			279777	11/17/16 11:12	AS	TAL SL
Total/NA	Analysis	9320		1	284171	12/16/16 13:42	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284751	12/20/16 14:26	CAH	TAL SL

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-130029-12**

**Date Collected: 11/11/16 09:55**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279775	11/17/16 10:29	AS	TAL SL
Total/NA	Analysis	9315		1	284403	12/17/16 14:11	MLK	TAL SL
Total/NA	Prep	PrecSep_0			279777	11/17/16 11:12	AS	TAL SL
Total/NA	Analysis	9320		1	284171	12/16/16 13:42	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284751	12/20/16 14:26	CAH	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: FB-2**

**Lab Sample ID: 400-130029-13**

**Date Collected: 11/11/16 09:55**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279775	11/17/16 10:29	AS	TAL SL
Total/NA	Analysis	9315		1	284403	12/17/16 14:11	MLK	TAL SL
Total/NA	Prep	PrecSep_0			279777	11/17/16 11:12	AS	TAL SL
Total/NA	Analysis	9320		1	284171	12/16/16 13:42	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284751	12/20/16 14:26	CAH	TAL SL

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-130029-14**

**Date Collected: 11/11/16 10:00**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279775	11/17/16 10:29	AS	TAL SL
Total/NA	Analysis	9315		1	284403	12/17/16 14:11	MLK	TAL SL
Total/NA	Prep	PrecSep_0			279777	11/17/16 11:12	AS	TAL SL
Total/NA	Analysis	9320		1	284171	12/16/16 13:41	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284751	12/20/16 14:26	CAH	TAL SL

**Client Sample ID: FERB-2**

**Lab Sample ID: 400-130029-15**

**Date Collected: 11/11/16 10:10**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279775	11/17/16 10:29	AS	TAL SL
Total/NA	Analysis	9315		1	284403	12/17/16 14:11	MLK	TAL SL
Total/NA	Prep	PrecSep_0			279777	11/17/16 11:12	AS	TAL SL
Total/NA	Analysis	9320		1	284171	12/16/16 13:41	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284751	12/20/16 14:26	CAH	TAL SL

**Client Sample ID: WGCW-12**

**Lab Sample ID: 400-130029-16**

**Date Collected: 11/11/16 12:15**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279775	11/17/16 10:29	AS	TAL SL
Total/NA	Analysis	9315		1	284403	12/17/16 14:11	MLK	TAL SL
Total/NA	Prep	PrecSep_0			279777	11/17/16 11:12	AS	TAL SL
Total/NA	Analysis	9320		1	284171	12/16/16 13:41	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284751	12/20/16 14:26	CAH	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-130029-17**

**Date Collected: 11/11/16 12:20**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279775	11/17/16 10:29	AS	TAL SL
Total/NA	Analysis	9315		1	284403	12/17/16 14:11	MLK	TAL SL
Total/NA	Prep	PrecSep_0			279777	11/17/16 11:12	AS	TAL SL
Total/NA	Analysis	9320		1	284171	12/16/16 13:41	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284751	12/20/16 14:26	CAH	TAL SL

**Client Sample ID: DUP-2**

**Lab Sample ID: 400-130029-18**

**Date Collected: 11/11/16 00:00**

**Matrix: Water**

**Date Received: 11/12/16 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			279775	11/17/16 10:29	AS	TAL SL
Total/NA	Analysis	9315		1	284403	12/17/16 14:11	MLK	TAL SL
Total/NA	Prep	PrecSep_0			279777	11/17/16 11:12	AS	TAL SL
Total/NA	Analysis	9320		1	284171	12/16/16 13:41	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	284751	12/20/16 14:26	CAH	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 Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

## Rad

### Prep Batch: 279775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130029-1	WGWA-7	Total/NA	Water	PrecSep-21	
400-130029-2	FB-1	Total/NA	Water	PrecSep-21	
400-130029-3	FERB-1	Total/NA	Water	PrecSep-21	
400-130029-4	WGWA-3	Total/NA	Water	PrecSep-21	
400-130029-5	WGWA-4	Total/NA	Water	PrecSep-21	
400-130029-6	WGWC-16	Total/NA	Water	PrecSep-21	
400-130029-7	WGWC-17	Total/NA	Water	PrecSep-21	
400-130029-8	WGWC-14	Total/NA	Water	PrecSep-21	
400-130029-9	WGWC-15	Total/NA	Water	PrecSep-21	
400-130029-10	WGWC-13	Total/NA	Water	PrecSep-21	
400-130029-11	DUP-1	Total/NA	Water	PrecSep-21	
400-130029-12	WGWC-10	Total/NA	Water	PrecSep-21	
400-130029-13	FB-2	Total/NA	Water	PrecSep-21	
400-130029-14	WGWC-11	Total/NA	Water	PrecSep-21	
400-130029-15	FERB-2	Total/NA	Water	PrecSep-21	
400-130029-16	WGCW-12	Total/NA	Water	PrecSep-21	
400-130029-17	WGWC-19	Total/NA	Water	PrecSep-21	
400-130029-18	DUP-2	Total/NA	Water	PrecSep-21	
MB 160-279775/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-279775/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-279775/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 279777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130029-1	WGWA-7	Total/NA	Water	PrecSep_0	
400-130029-2	FB-1	Total/NA	Water	PrecSep_0	
400-130029-3	FERB-1	Total/NA	Water	PrecSep_0	
400-130029-4	WGWA-3	Total/NA	Water	PrecSep_0	
400-130029-5	WGWA-4	Total/NA	Water	PrecSep_0	
400-130029-6	WGWC-16	Total/NA	Water	PrecSep_0	
400-130029-7	WGWC-17	Total/NA	Water	PrecSep_0	
400-130029-8	WGWC-14	Total/NA	Water	PrecSep_0	
400-130029-9	WGWC-15	Total/NA	Water	PrecSep_0	
400-130029-10	WGWC-13	Total/NA	Water	PrecSep_0	
400-130029-11	DUP-1	Total/NA	Water	PrecSep_0	
400-130029-12	WGWC-10	Total/NA	Water	PrecSep_0	
400-130029-13	FB-2	Total/NA	Water	PrecSep_0	
400-130029-14	WGWC-11	Total/NA	Water	PrecSep_0	
400-130029-15	FERB-2	Total/NA	Water	PrecSep_0	
400-130029-16	WGCW-12	Total/NA	Water	PrecSep_0	
400-130029-17	WGWC-19	Total/NA	Water	PrecSep_0	
400-130029-18	DUP-2	Total/NA	Water	PrecSep_0	
MB 160-279777/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-279777/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-279777/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

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

**Lab Sample ID: MB 160-279775/1-A**  
**Matrix: Water**  
**Analysis Batch: 284402**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 279775**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1267	U	0.217	0.218	1.00	0.378	pCi/L	11/17/16 10:29	12/17/16 12:06	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.6		40 - 110					11/17/16 10:29	12/17/16 12:06	1

**Lab Sample ID: LCS 160-279775/2-A**  
**Matrix: Water**  
**Analysis Batch: 284477**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 279775**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.1	14.50		1.59	1.00	0.191	pCi/L	131	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	81.5		40 - 110						

**Lab Sample ID: LCSD 160-279775/3-A**  
**Matrix: Water**  
**Analysis Batch: 284402**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 279775**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.1	15.05		1.77	1.00	0.300	pCi/L	136	68 - 137	0.16	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	80.6		40 - 110								

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

**Lab Sample ID: MB 160-279777/1-A**  
**Matrix: Water**  
**Analysis Batch: 284170**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 279777**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3950	U	0.305	0.307	1.00	0.482	pCi/L	11/17/16 11:12	12/16/16 13:30	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.6		40 - 110					11/17/16 11:12	12/16/16 13:30	1
Y Carrier	86.7		40 - 110					11/17/16 11:12	12/16/16 13:30	1

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130029-2  
 SDG: Ash Pond

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

**Lab Sample ID: LCS 160-279777/2-A**  
**Matrix: Water**  
**Analysis Batch: 284170**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 279777**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.1	16.93		1.80	1.00	0.399	pCi/L	120	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	81.5		40 - 110
Y Carrier	91.6		40 - 110

**Lab Sample ID: LCSD 160-279777/3-A**  
**Matrix: Water**  
**Analysis Batch: 284170**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 279777**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	14.1	17.58		1.87	1.00	0.418	pCi/L	124	56 - 140	0.18	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	80.6		40 - 110
Y Carrier	90.5		40 - 110





### Chain of Custody Record

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

**Client Information**  
 Client Contact: Whitmore, Cheyenne R  
 Joju Abraham  
 Company: ERM  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State: GA Zip: 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

Lab PM: Whitmore, Cheyenne R  
 E-Mail: cheyenne.whitmore@testamericainc.com  
 Carrier Tracking No(s):  
 Due Date Requested:  
 TAT Requested (days):  
 PO #:  
 WG #:  
 Project #:  
 SSON#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=organic, G=grab)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TDS - SM 2540C ; Cl, F, SO4 - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320	Total Number of Containers	Special Instructions/Note:
WGWA-7	11/10/16	0900	G	W	N	1	1	1	1	3	
FB-1	11/10/16	0910	G	W	N	1	1	1	1	3	
FERB-1	11/10/16	0940	G	W	N	1	1	1	1	3	
WGWA-3	11/10/16	0925	G	W	N	1	1	1	1	3	
WGWA-4	11/10/16	1110	G	W	N	1	1	1	1	3	
WGWC-16	11/10/16	1255	G	W	N	1	1	1	1	3	
WGWC-17	11/10/16	1350	G	W	N	1	1	1	1	3	
WGWC-14	11/10/16	1525	G	W	N	1	1	1	1	3	
WGWC-15	11/10/16	1625	G	W	N	1	1	1	1	3	
WGWC-13	11/10/16	1626	G	W	N	1	1	1	1	3	
DUP-1	11/10/16	-	G	W	N	1	1	1	1	3	

**Analysis Requested**  
 Analysis Requested: 400-130029 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 - Na2S2O3  
 S - H2SO4  
 T - TSP Dodecahydrate  
 U - Acetone  
 V - MCAA  
 W - ph 4-5  
 X - EDTA  
 Z - other (specify)

**Possible Hazard Identification**  
 Non-Hazard  
 Flammable  
 Skin Irritant  
 Poison B  
 Unknown  
 Radiological

**Deliverable Requested:** I, II, III, IV, Other (specify)  
 Empty Kit Relinquished by:  
 Relinquished by: Will King  
 Date/Time: 11/11/16 1440  
 Relinquished by: [Signature]  
 Date/Time: 11/11/16 1530  
 Relinquished by: [Signature]  
 Date/Time: 11/11/16 1530

**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:** please cc: Maria Padilla and Heath McCorkle on results  
 Method of Shipment:  
 Received by: [Signature] Date/Time: 11-11-16 1440 Company: ERM  
 Received by: [Signature] Date/Time: 11/12/16 0850 Company: ERM  
 Received by: [Signature] Date/Time: 11/11/16 1530 Company: ERM

**Custody Seal No.:** 745946, 745960  
 Yes  No   
 Cooler Temperature(s) °C and/or other Remarks: 3.2°C, 1.7°C, 2.2°C, IRC



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

**Chain of Custody Record**

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING

Lab P/N: Whitmire, Cheyenne R  
 Carrier Tracking No(s):  
 Client Contact: JoLu Abraham  
 E-Mail: cheyenne.whitmire@testamericainc.com  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

Due Date Requested:  
 TAT Requested (days):  
 PO #:  
 WO #:  
 Project #:  
 SSON#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, B=bottoms, A=air)	Field Filled Sample (Yes or No)	Pattern MS/MSD (Yes or No)	Analysis Requested				Special Instructions/Note:
							TDS - SM 2540C: Cl, F, SO4 - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320	Total Number of Containers	
WGWC-10	11/11/16	0955	G	W	N	X	1	1	1	3	
FB-2	11/11/16	0955	G	W	N		1	1	1	3	
WGWC-11	11/11/16	1000	G	W	N		1	1	1	3	
FERB-2	11/11/16	1010	G	W	N		1	1	1	3	
WGWC-12	11/11/16	1215	G	W	N		1	1	1	3	
WGWC-19	11/11/16	1220	G	W	N		1	1	1	3	
DUP-2	11/11/16	-	G	W	N		1	1	1	3	

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months  
 Special Instructions/QC Requirements: please cc: Maria Padilla and Heath McConkie on results

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: *Will Virgo* Date: 11/11/16 1440 Company: ERM  
 Relinquished by: *Will Virgo* Date: 11/11/16 1530 Company: Company  
 Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Company: Company

Custody Seal No: 745946, 745946, 745960  
 Custody Seals Intact:  Yes  No  
 Cooler Temperature(s) °C and Other Remarks: 3.2°C, 1.7°C, 2.2°C 12-6

- Preservation Codes:**
- A - HCL
  - M - Hexane
  - B - NaOH
  - N - None
  - C - Zn Acetate
  - O - As/NaO2
  - D - Nitric Acid
  - P - Na2OAS
  - E - NaHSO4
  - Q - Na2SO3
  - R - MeOH
  - S - H2SO4
  - F - Amchlor
  - 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)



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-130029-2

SDG Number: Ash Pond

**Login Number: 130029**

**List Number: 1**

**Creator: Perez, Trina M**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	745945, 745946, 745960
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	3.2°C, 1.7°C, 2.2°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 Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

## 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 Wansley

TestAmerica Job ID: 400-130029-2  
SDG: Ash Pond

## Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-17 *
South Carolina	State Program	4	85002001	06-30-17
Texas	NELAP	6	T104704193-16-10	07-31-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-14-0016	01-09-17
Utah	NELAP	8	MO000542016-8	07-31-17
Virginia	NELAP	3	460230	06-14-17
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-17

\* Certification renewal pending - certification considered valid.

TestAmerica Pensacola

# 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: 400-130169-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Plant Wansley

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

12/7/2016 2:37:37 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

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

### LINKS

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results through

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

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

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

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# Case Narrative

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130169-1  
SDG: Ash Pond

**Job ID: 400-130169-1**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-130169-1

#### HPLC/IC

Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: WGWC-8 (400-130169-1). Elevated reporting limits (RLs) are provided.

#### Metals

Method(s) 6020: The method blank for preparation batch 331937 and analytical batch 332176 contained Selenium 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) 6020: The internal standard Lithium-6 recovered below in house recommended recovery limits for (CCB 400-332176/178), (CCB 400-332176/79), (CCV 400-332176/175) and (CCV 400-332176/76). However, the internal standard recoveries meet the criteria stated in method 6020.





# Detection Summary

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130169-1  
 SDG: Ash Pond

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-130169-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	25		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.20		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	160		5.0	3.5	mg/L	5		300.0	Total/NA
Barium	0.00085	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.0014	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Boron	1.3		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	32		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.017		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.0033	B	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	320		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Method Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130169-1  
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN

#### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 Wansley

TestAmerica Job ID: 400-130169-1  
SDG: Ash Pond

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-130169-1	WGWC-8	Water	11/14/16 11:50	11/16/16 08:51

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- 1
- 2
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# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130169-1  
SDG: Ash Pond

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-130169-1**

**Date Collected: 11/14/16 11:50**

**Matrix: Water**

**Date Received: 11/16/16 08:51**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	25		1.0	0.89	mg/L			12/01/16 04:23	1
Fluoride	0.20		0.20	0.082	mg/L			12/01/16 04:23	1
Sulfate	160		5.0	3.5	mg/L			12/06/16 03:57	5

### 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		11/21/16 13:20	11/22/16 18:11	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 18:11	5
Barium	0.00085	J	0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 18:11	5
Beryllium	0.0014	J	0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 18:11	5
Boron	1.3		0.050	0.021	mg/L		11/21/16 13:20	11/22/16 18:11	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 18:11	5
Calcium	32		0.25	0.13	mg/L		11/21/16 13:20	11/22/16 18:11	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 18:11	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 18:11	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 18:11	5
Lithium	0.017		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 18:11	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 18:11	5
Selenium	0.0033	B	0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 18:11	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 18:11	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		11/28/16 09:08	11/29/16 13:00	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	320		5.0	3.4	mg/L			11/17/16 17:11	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130169-1  
SDG: Ash Pond

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

## 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 Wansley

TestAmerica Job ID: 400-130169-1  
SDG: Ash Pond

**Client Sample ID: WGWC-8**

**Date Collected: 11/14/16 11:50**

**Date Received: 11/16/16 08:51**

**Lab Sample ID: 400-130169-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	333261	12/01/16 04:23	TAJ	TAL PEN
Total/NA	Analysis	300.0		5	333877	12/06/16 03:57	TAJ	TAL PEN
Total Recoverable	Prep	3005A			331937	11/21/16 13:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332176	11/22/16 18:11	AJR	TAL PEN
Total/NA	Prep	7470A			332715	11/28/16 09:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	332993	11/29/16 13:00	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331538	11/17/16 17:11	TET	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 Wansley

TestAmerica Job ID: 400-130169-1  
SDG: Ash Pond

## HPLC/IC

### Analysis Batch: 333261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130169-1	WGWC-8	Total/NA	Water	300.0	
MB 400-333261/86	Method Blank	Total/NA	Water	300.0	
LCS 400-333261/87	Lab Control Sample	Total/NA	Water	300.0	
LCS D 400-333261/88	Lab Control Sample Dup	Total/NA	Water	300.0	
400-130029-A-16 MS	Matrix Spike	Total/NA	Water	300.0	
400-130029-A-16 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 333877

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130169-1	WGWC-8	Total/NA	Water	300.0	
MB 400-333877/4	Method Blank	Total/NA	Water	300.0	
LCS 400-333877/5	Lab Control Sample	Total/NA	Water	300.0	
LCS D 400-333877/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-130805-I-4 MS	Matrix Spike	Total/NA	Water	300.0	
400-130805-I-4 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

## Metals

### Prep Batch: 331937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130169-1	WGWC-8	Total Recoverable	Water	3005A	
MB 400-331937/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-331937/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-130146-C-2-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-130146-C-2-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Analysis Batch: 332176

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130169-1	WGWC-8	Total Recoverable	Water	6020	331937
MB 400-331937/1-A ^5	Method Blank	Total Recoverable	Water	6020	331937
LCS 400-331937/2-A	Lab Control Sample	Total Recoverable	Water	6020	331937
400-130146-C-2-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	331937
400-130146-C-2-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	331937

### Prep Batch: 332715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130169-1	WGWC-8	Total/NA	Water	7470A	
MB 400-332715/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-332715/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-130502-A-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-130502-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

### Analysis Batch: 332993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130169-1	WGWC-8	Total/NA	Water	7470A	332715
MB 400-332715/14-A	Method Blank	Total/NA	Water	7470A	332715
LCS 400-332715/15-A	Lab Control Sample	Total/NA	Water	7470A	332715
400-130502-A-1-B MS	Matrix Spike	Total/NA	Water	7470A	332715
400-130502-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	332715

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130169-1  
SDG: Ash Pond

## General Chemistry

### Analysis Batch: 331538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130169-1	WGWC-8	Total/NA	Water	SM 2540C	
MB 400-331538/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-331538/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-130075-C-1 DU	Duplicate	Total/NA	Water	SM 2540C	

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# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130169-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 400-333261/86**  
**Matrix: Water**  
**Analysis Batch: 333261**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			11/30/16 23:26	1
Fluoride	<0.082		0.20	0.082	mg/L			11/30/16 23:26	1

**Lab Sample ID: LCS 400-333261/87**  
**Matrix: Water**  
**Analysis Batch: 333261**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.96		mg/L		100	90 - 110
Fluoride	10.0	9.63		mg/L		96	90 - 110

**Lab Sample ID: LCSD 400-333261/88**  
**Matrix: Water**  
**Analysis Batch: 333261**

**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	10.0	10.2		mg/L		102	90 - 110	2	15
Fluoride	10.0	9.68		mg/L		97	90 - 110	1	15

**Lab Sample ID: 400-130029-A-16 MS**  
**Matrix: Water**  
**Analysis Batch: 333261**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	3.5		10.0	14.0		mg/L		105	80 - 120
Fluoride	<0.082		10.0	10.3		mg/L		103	80 - 120

**Lab Sample ID: 400-130029-A-16 MSD**  
**Matrix: Water**  
**Analysis Batch: 333261**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	3.5		10.0	14.0		mg/L		105	80 - 120	0	20
Fluoride	<0.082		10.0	10.2		mg/L		102	80 - 120	1	20

**Lab Sample ID: MB 400-333877/4**  
**Matrix: Water**  
**Analysis Batch: 333877**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<0.70		1.0	0.70	mg/L			12/05/16 23:00	1

**Lab Sample ID: LCS 400-333877/5**  
**Matrix: Water**  
**Analysis Batch: 333877**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	10.0	10.7		mg/L		107	90 - 110

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130169-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCSD 400-333877/6**  
**Matrix: Water**  
**Analysis Batch: 333877**

**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	10.0	10.4		mg/L		104	90 - 110	2	15

**Lab Sample ID: 400-130805-I-4 MS**  
**Matrix: Water**  
**Analysis Batch: 333877**

**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	350		100	460		mg/L		111	80 - 120

**Lab Sample ID: 400-130805-I-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 333877**

**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	350		100	460		mg/L		111	80 - 120	0	20

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

**Lab Sample ID: MB 400-331937/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 332176**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 331937**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		11/21/16 13:20	11/22/16 14:34	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 13:20	11/22/16 14:34	5
Barium	<0.00049		0.0025	0.00049	mg/L		11/21/16 13:20	11/22/16 14:34	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 14:34	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 13:20	11/22/16 14:34	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 13:20	11/22/16 14:34	5
Calcium	<0.13		0.25	0.13	mg/L		11/21/16 13:20	11/22/16 14:34	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 13:20	11/22/16 14:34	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/21/16 13:20	11/22/16 14:34	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 13:20	11/22/16 14:34	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 13:20	11/22/16 14:34	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 13:20	11/22/16 14:34	5
Selenium	0.000305	J	0.0013	0.00024	mg/L		11/21/16 13:20	11/22/16 14:34	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 13:20	11/22/16 14:34	5

**Lab Sample ID: LCS 400-331937/2-A**  
**Matrix: Water**  
**Analysis Batch: 332176**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 331937**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0525		mg/L		105	80 - 120
Arsenic	0.0500	0.0516		mg/L		103	80 - 120
Barium	0.0500	0.0490		mg/L		98	80 - 120
Beryllium	0.0500	0.0476		mg/L		95	80 - 120
Boron	0.100	0.0957		mg/L		96	80 - 120
Cadmium	0.0500	0.0509		mg/L		102	80 - 120

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130169-1  
SDG: Ash Pond

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

**Lab Sample ID: LCS 400-331937/2-A**  
**Matrix: Water**  
**Analysis Batch: 332176**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 331937**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	5.00	4.87		mg/L		97	80 - 120
Chromium	0.0500	0.0488		mg/L		98	80 - 120
Cobalt	0.0500	0.0499		mg/L		100	80 - 120
Lead	0.0500	0.0492		mg/L		98	80 - 120
Lithium	0.0500	0.0510		mg/L		102	80 - 120
Molybdenum	0.0500	0.0514		mg/L		103	80 - 120
Selenium	0.0500	0.0501		mg/L		100	80 - 120
Thallium	0.0100	0.0102		mg/L		102	80 - 120

**Lab Sample ID: 400-130146-C-2-B MS ^5**  
**Matrix: Water**  
**Analysis Batch: 332176**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 331937**

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	0.0514		mg/L		103	75 - 125
Barium	0.039		0.0500	0.0864		mg/L		94	75 - 125
Beryllium	<0.00034		0.0500	0.0476		mg/L		95	75 - 125
Boron	<0.021		0.100	0.101		mg/L		101	75 - 125
Cadmium	<0.00034		0.0500	0.0528		mg/L		106	75 - 125
Calcium	2.5		5.00	7.49		mg/L		99	75 - 125
Chromium	<0.0011		0.0500	0.0496		mg/L		99	75 - 125
Cobalt	0.00064	J	0.0500	0.0515		mg/L		102	75 - 125
Lead	<0.00035		0.0500	0.0500		mg/L		100	75 - 125
Lithium	<0.0032		0.0500	0.0530		mg/L		106	75 - 125
Molybdenum	<0.00085		0.0500	0.0526		mg/L		105	75 - 125
Selenium	<0.00024		0.0500	0.0512		mg/L		102	75 - 125
Thallium	<0.00085		0.0100	0.0103		mg/L		103	75 - 125

**Lab Sample ID: 400-130146-C-2-C MSD ^5**  
**Matrix: Water**  
**Analysis Batch: 332176**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 331937**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	<0.0010		0.0500	0.0522		mg/L		104	75 - 125	4	20
Arsenic	<0.00046		0.0500	0.0508		mg/L		102	75 - 125	1	20
Barium	0.039		0.0500	0.0870		mg/L		95	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0470		mg/L		94	75 - 125	1	20
Boron	<0.021		0.100	0.0957		mg/L		96	75 - 125	5	20
Cadmium	<0.00034		0.0500	0.0527		mg/L		105	75 - 125	0	20
Calcium	2.5		5.00	7.38		mg/L		97	75 - 125	2	20
Chromium	<0.0011		0.0500	0.0500		mg/L		100	75 - 125	1	20
Cobalt	0.00064	J	0.0500	0.0514		mg/L		102	75 - 125	0	20
Lead	<0.00035		0.0500	0.0495		mg/L		99	75 - 125	1	20
Lithium	<0.0032		0.0500	0.0529		mg/L		106	75 - 125	0	20
Molybdenum	<0.00085		0.0500	0.0512		mg/L		102	75 - 125	3	20
Selenium	<0.00024		0.0500	0.0512		mg/L		102	75 - 125	0	20
Thallium	<0.00085		0.0100	0.0102		mg/L		102	75 - 125	1	20

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130169-1  
SDG: Ash Pond

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 400-332715/14-A**  
**Matrix: Water**  
**Analysis Batch: 332993**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 332715**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000844	J	0.00020	0.000070	mg/L		11/28/16 08:31	11/29/16 12:25	1

**Lab Sample ID: LCS 400-332715/15-A**  
**Matrix: Water**  
**Analysis Batch: 332993**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 332715**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00102		mg/L		101	80 - 120

**Lab Sample ID: 400-130502-A-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 332993**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 332715**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00198		mg/L		98	80 - 120

**Lab Sample ID: 400-130502-A-1-C MSD**  
**Matrix: Water**  
**Analysis Batch: 332993**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 332715**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00194		mg/L		96	80 - 120	2	20

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

**Lab Sample ID: MB 400-331538/1**  
**Matrix: Water**  
**Analysis Batch: 331538**

**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			11/17/16 17:11	1

**Lab Sample ID: LCS 400-331538/2**  
**Matrix: Water**  
**Analysis Batch: 331538**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	293	264		mg/L		90	78 - 122

**Lab Sample ID: 400-130075-C-1 DU**  
**Matrix: Water**  
**Analysis Batch: 331538**

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	52		52.0		mg/L		0	5

TestAmerica Pensacola

# Chain of Custody Record

<b>Client Information</b>		Sampler: Andreas Shoreffits AS		Lab PM: Whitmire, Cheyenne R.		Carrier Tracking No(s):		COC No:	
Client Contact: Jojo Abraham		Phone:		E-Mail: cheyenne.whitmire@testamerica.com		Page: 1 of 1		Job #:	
Company: Southern Company		Address: 241 Ralph McGill Blvd SE B10185		City: Atlanta		State, Zip: GA, 30308		Phone: 404-506-7239	
Email: JAbraham@southernco.com		Project Name: Plant Wansley - Ash Pond		Project #:		SSOW#:		CCR	
Due Date Requested:		TAT Requested (days):		Field Filtered Sample (Yes or No)		Perform (MS/MSD) (Yes or No)		TDS - SM 2540C ; Cl <sub>2</sub> F <sub>2</sub> SO <sub>4</sub> - EPA 300	
Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solids, O=oils)		Preservation Code: (BT=Blood, A=Air)	
11/14/16		11:50		G		W		N	
WGWC-8								Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	
								Radium 226 & 228 - SW-846 9315 & 9320	
								Total Number of Containers	
								3	
								Special Instructions/Note:	
								400-130169 COC	
								QR Code	
								Preservation Codes:	
								A - HCl	
								B - NaOH	
								C - Zn Acetate	
								D - Nitric Acid	
								E - NaHSO <sub>4</sub>	
								F - MeOH	
								G - Amchlor	
								H - Ascorbic Acid	
								I - Ice	
								J - DI Water	
								K - EDTA	
								L - EDA	
								Other:	
								M - Hexane	
								N - None	
								O - AsNaO <sub>2</sub>	
								P - Na <sub>2</sub> O <sub>4</sub> S	
								Q - Na <sub>2</sub> SO <sub>3</sub>	
								R - Na <sub>2</sub> SO <sub>3</sub>	
								S - H <sub>2</sub> SO <sub>4</sub>	
								T - TSP Dodecahydrate	
								U - Acetone	
								V - MCAA	
								W - ph 4-5	
								Z - other (Specify)	
<b>Possible Hazard Identification</b>		<input checked="" 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"/> Unknown		<input type="checkbox"/> Radiological		<input type="checkbox"/> Radiological			
Deliverable Requested: I, II, III, IV, Other (specify)		Date: 11/15/16		Date: 11/15/16		Date: 11/15/16		Date: 11/15/16	
Empty Kit Relinquished by:		Date: 11/15/16		Date: 11/15/16		Date: 11/15/16		Date: 11/15/16	
Relinquished by: [Signature]		Date: 11/15/16		Date: 11/15/16		Date: 11/15/16		Date: 11/15/16	
Relinquished by: [Signature]		Date: 11/15/16		Date: 11/15/16		Date: 11/15/16		Date: 11/15/16	
Relinquished by: [Signature]		Date: 11/15/16		Date: 11/15/16		Date: 11/15/16		Date: 11/15/16	
Custody Seals Intact: [Signature]		Date: 11/15/16		Date: 11/15/16		Date: 11/15/16		Date: 11/15/16	
Custody Seal No.:		Date: 11/15/16		Date: 11/15/16		Date: 11/15/16		Date: 11/15/16	
Cooler Temperature(s) °C and Other Remarks: 3.8°C IRG		Date: 11/15/16		Date: 11/15/16		Date: 11/15/16		Date: 11/15/16	



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-130169-1

SDG Number: Ash Pond

**Login Number: 130169**

**List Number: 1**

**Creator: Hughes, Nicholas T**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	745964
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	3.8°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 <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 Wansley

TestAmerica Job ID: 400-130169-1  
 SDG: Ash Pond

## Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP Secondary AB	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-16
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17



# 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: 400-130169-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Plant Wansley

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

12/30/2016 8:59:32 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

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

### LINKS

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Have a Question?



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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 Wansley

TestAmerica Job ID: 400-130169-2  
SDG: Ash Pond

**Job ID: 400-130169-2**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-130169-2

#### RAD

Method(s) PrecSep\_0: Radium-228 Prep Batch 160-280944: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with WGWC-8 (400-130169-1) . 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 160-280943: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with WGWC-8 (400-130169-1) . 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 Wansley

TestAmerica Job ID: 400-130169-2  
SDG: Ash Pond

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 Wansley

TestAmerica Job ID: 400-130169-2  
SDG: Ash Pond

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-130169-1	WGWC-8	Water	11/14/16 11:50	11/16/16 08:51

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# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130169-2  
SDG: Ash Pond

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-130169-1**

**Date Collected: 11/14/16 11:50**

**Matrix: Water**

**Date Received: 11/16/16 08:51**

**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	U	0.220	0.220	1.00	0.349	pCi/L	11/25/16 13:04	12/28/16 07:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.2		40 - 110					11/25/16 13:04	12/28/16 07:13	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.541		0.289	0.293	1.00	0.431	pCi/L	11/25/16 13:27	12/27/16 18:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.2		40 - 110					11/25/16 13:27	12/27/16 18:41	1
Y Carrier	84.9		40 - 110					11/25/16 13:27	12/27/16 18:41	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.749		0.363	0.367	5.00	0.431	pCi/L		12/29/16 15:22	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130169-2  
SDG: Ash Pond

## 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 Wansley

TestAmerica Job ID: 400-130169-2  
SDG: Ash Pond

**Client Sample ID: WGWC-8**

**Date Collected: 11/14/16 11:50**

**Date Received: 11/16/16 08:51**

**Lab Sample ID: 400-130169-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			280943	11/25/16 13:04	AS	TAL SL
Total/NA	Analysis	9315		1	285700	12/28/16 07:13	RTM	TAL SL
Total/NA	Prep	PrecSep_0			280944	11/25/16 13:27	AS	TAL SL
Total/NA	Analysis	9320		1	285489	12/27/16 18:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285842	12/29/16 15:22	CAH	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 Wansley

TestAmerica Job ID: 400-130169-2  
SDG: Ash Pond

## Rad

### Prep Batch: 280943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130169-1	WGWC-8	Total/NA	Water	PrecSep-21	
MB 160-280943/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-280943/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-280943/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 280944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130169-1	WGWC-8	Total/NA	Water	PrecSep_0	
MB 160-280944/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-280944/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-280944/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	



# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130169-2  
SDG: Ash Pond

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

**Lab Sample ID: MB 160-280943/1-A**  
**Matrix: Water**  
**Analysis Batch: 285700**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 280943**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.01734	U	0.214	0.214	1.00	0.419	pCi/L	11/25/16 13:04	12/28/16 07:12	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.1		40 - 110					11/25/16 13:04	12/28/16 07:12	1

**Lab Sample ID: LCS 160-280943/2-A**  
**Matrix: Water**  
**Analysis Batch: 285700**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 280943**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.1	11.45		1.48	1.00	0.385	pCi/L	103	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	81.2		40 - 110						

**Lab Sample ID: LCSD 160-280943/3-A**  
**Matrix: Water**  
**Analysis Batch: 285700**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 280943**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.1	14.44		1.77	1.00	0.325	pCi/L	130	68 - 137	0.92	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	81.8		40 - 110								

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

**Lab Sample ID: MB 160-280944/1-A**  
**Matrix: Water**  
**Analysis Batch: 285489**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 280944**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.08031	U	0.266	0.266	1.00	0.490	pCi/L	11/25/16 13:27	12/27/16 18:41	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.1		40 - 110					11/25/16 13:27	12/27/16 18:41	1
Y Carrier	81.1		40 - 110					11/25/16 13:27	12/27/16 18:41	1

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-130169-2  
 SDG: Ash Pond

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

**Lab Sample ID: LCS 160-280944/2-A**  
**Matrix: Water**  
**Analysis Batch: 285489**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 280944**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.1	15.17		1.69	1.00	0.466	pCi/L	108	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	81.2		40 - 110
Y Carrier	77.0		40 - 110

**Lab Sample ID: LCSD 160-280944/3-A**  
**Matrix: Water**  
**Analysis Batch: 285489**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 280944**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	Limit
Radium-228	14.1	16.09		1.75	1.00	0.440	pCi/L	114	56 - 140	0.27	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	81.8		40 - 110
Y Carrier	84.5		40 - 110

**Chain of Custody Record**

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

**Client Information**  
 Client Contact: Andreas Shoreffits AS  
 Client Name: Whitire, Cheyenne R  
 Phone: cheyenne.whitire@testamericainc.com  
 E-Mail: cheyenne.whitire@testamericainc.com  
 Company: Southern Company

**Sample Information**  
 Date Requested: 1/14/16  
 TAT Requested (days):  
 PO #: 404-506-7239  
 Matrix: G=Grab  
 Sample Type: W  
 Sample Time: 1150  
 Sample Date: 1/14/16  
 Preservation Code: W  
 Matrix (Water, Solid, Oil):  
 Project Name: Plant Wansley - Ash Pond  
 SOW#: CCR

**Analysis Requested**  
 Perform MS/MSD (Yes or No):  
 Field Filtered Sample (Yes or No):  
 TDS - SM 2540C ; Cl<sub>2</sub>F<sub>2</sub>SO<sub>4</sub> - EPA 300  
 Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470  
 Radum 226 & 228 - SW-846 9315 & 9320

Sample ID	Sample Date	Sample Time	Sample Type	Matrix	Field Filtered Sample (Yes/No)	Perform MS/MSD (Yes/No)	TDS - SM 2540C ; Cl <sub>2</sub> F <sub>2</sub> SO <sub>4</sub> - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	Radum 226 & 228 - SW-846 9315 & 9320	Total Number of Containers	Special Instructions/Note
WGWC-8	1/14/16	1150	G	W	N					3	

**Possible Hazard Identification**  
 Non-Hazard  
 Flammable  
 Skin Irritant  
 Poison B  
 Unknown  
 Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)

**Sample Disposal** ( A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  
 Disposal By Lab  
 Archive For \_\_\_\_\_ Months  
 Special Instructions/QC Requirements: please cc: Maria Pacilla and Heath McCorkle on results

**Empty Kit Relinquished by:**  
 Relinquished by: *Tom M. ...* Date: 1/15/16 1515  
 Relinquished by: *TA* Date: 1/15/16 1700  
 Relinquished by: *TA* Date: 1/16/16 851

**Company Information:**  
 Received by: *TA* Date: 1/15/16 1515 Company: TA  
 Received by: *TA* Date: 1/15/16 1700 Company: TA  
 Received by: *TA* Date: 1/16/16 851 Company: TA

Cooler Temperature(s) °C and/or °F: 3.8°C  
 Cooler Remarks: IRG



681-Atlanta

# Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-130169-2

SDG Number: Ash Pond

**Login Number: 130169**

**List Number: 1**

**Creator: Hughes, Nicholas T**

**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.	True	745964
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	3.8°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").	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 Wansley

TestAmerica Job ID: 400-130169-2  
SDG: Ash Pond

## 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 Wansley

TestAmerica Job ID: 400-130169-2  
SDG: Ash Pond

## 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

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-132828-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Plant Wansley

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

2/10/2017 7:09:01 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

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

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

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

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

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

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# Case Narrative

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

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**Job ID: 400-132828-1**

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**Laboratory: TestAmerica Pensacola**

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**Narrative**

**Job Narrative**  
**400-132828-1**

**HPLC/IC**

Method(s) 300.0: The continuing calibration verification (CCV) associated with batch 339461 recovered above the upper control limit for Fluoride. The samples associated with this CCV were non-detect above the Reporting Limit for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCV 400-339461/35).

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# Detection Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

## Client Sample ID: WGWA-2

## Lab Sample ID: 400-132828-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.3		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	2.1		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00099	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.017		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	28		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0090		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Vanadium	0.0021	J	0.0025	0.0014	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	120		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-1

## Lab Sample ID: 400-132828-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.8		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.044		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0010	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Vanadium	0.0021	J	0.0025	0.0014	mg/L	5		6020	Total Recoverable
Zinc	0.012	J	0.020	0.0065	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	8.0		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: DUP-1

## Lab Sample ID: 400-132828-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.3		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.11	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	2.1		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0011	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.018		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	28		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0088		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Vanadium	0.0043		0.0025	0.0014	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	110		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-6

## Lab Sample ID: 400-132828-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.5		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.11	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	9.4		1.0	0.70	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

## Client Sample ID: WGWA-6 (Continued)

## Lab Sample ID: 400-132828-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00080	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.0070		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	26		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0046	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	120		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-4

## Lab Sample ID: 400-132828-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.3		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.15	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	5.1		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0012	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.0059		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	17		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0033	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	98		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-3

## Lab Sample ID: 400-132828-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.7		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.99	J	1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00086	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.014		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	22		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-7

## Lab Sample ID: 400-132828-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.8		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	1.4		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0010	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.013		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	10		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00097	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0010	J	0.015	0.00085	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 Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

## Client Sample ID: WGWA-7 (Continued)

## Lab Sample ID: 400-132828-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	50		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-5

## Lab Sample ID: 400-132828-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.8		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	21		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.034		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	13		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.064		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

## Client Sample ID: WGWA-18

## Lab Sample ID: 400-132828-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.0		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.087	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	7.4		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00079	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	8.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0032		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

## Client Sample ID: FERB-1

## Lab Sample ID: 400-132828-10

No Detections.

## Client Sample ID: FB-1

## Lab Sample ID: 400-132828-11

No Detections.

## Client Sample ID: WGWC-17

## Lab Sample ID: 400-132828-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.5		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.18	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	5.3		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.018		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	10		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0014	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0044	J	0.0050	0.0032	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 Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

**Client Sample ID: WGWC-17 (Continued)**

**Lab Sample ID: 400-132828-12**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	0.0094	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	82		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola



# Method Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN

#### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132828-1	WGWA-2	Water	01/17/17 11:35	01/19/17 08:48
400-132828-2	WGWA-1	Water	01/17/17 13:35	01/19/17 08:48
400-132828-3	DUP-1	Water	01/17/17 00:00	01/19/17 08:48
400-132828-4	WGWA-6	Water	01/18/17 12:30	01/20/17 09:08
400-132828-5	WGWA-4	Water	01/18/17 13:50	01/20/17 09:08
400-132828-6	WGWA-3	Water	01/18/17 15:15	01/20/17 09:08
400-132828-7	WGWA-7	Water	01/18/17 17:10	01/20/17 09:08
400-132828-8	WGWA-5	Water	01/19/17 10:05	01/21/17 09:07
400-132828-9	WGWA-18	Water	01/19/17 13:20	01/21/17 09:07
400-132828-10	FERB-1	Water	01/19/17 12:00	01/21/17 09:07
400-132828-11	FB-1	Water	01/19/17 13:55	01/21/17 09:07
400-132828-12	WGWC-17	Water	01/20/17 10:35	01/21/17 09:07

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

**Client Sample ID: WGWA-2**

**Lab Sample ID: 400-132828-1**

**Date Collected: 01/17/17 11:35**

**Matrix: Water**

**Date Received: 01/19/17 08:48**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>2.3</b>		1.0	0.89	mg/L			01/23/17 19:38	1
Fluoride	<0.082		0.20	0.082	mg/L			01/23/17 19:38	1
<b>Sulfate</b>	<b>2.1</b>		1.0	0.70	mg/L			01/23/17 19:38	1

### 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		01/23/17 08:50	01/26/17 16:29	5
<b>Arsenic</b>	<b>0.00099</b>	<b>J</b>	0.0013	0.00046	mg/L		01/23/17 08:50	01/26/17 16:29	5
<b>Barium</b>	<b>0.017</b>		0.0025	0.00049	mg/L		01/23/17 08:50	01/26/17 16:29	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 16:29	5
Boron	<0.021		0.050	0.021	mg/L		01/23/17 08:50	01/26/17 16:29	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 16:29	5
<b>Calcium</b>	<b>28</b>		0.25	0.13	mg/L		01/23/17 08:50	01/26/17 16:29	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/23/17 08:50	01/26/17 16:29	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/23/17 08:50	01/26/17 16:29	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/23/17 08:50	01/26/17 16:29	5
<b>Lithium</b>	<b>0.0090</b>		0.0050	0.0032	mg/L		01/23/17 08:50	01/26/17 16:29	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/23/17 08:50	01/26/17 16:29	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/23/17 08:50	01/26/17 16:29	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/23/17 08:50	01/26/17 16:29	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/23/17 08:50	01/26/17 16:29	5
<b>Vanadium</b>	<b>0.0021</b>	<b>J</b>	0.0025	0.0014	mg/L		01/23/17 08:50	01/26/17 16:29	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/23/17 08:50	01/26/17 16:29	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/23/17 08:50	01/26/17 16:29	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/23/17 08:50	01/26/17 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		01/25/17 09:21	01/27/17 13:00	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>120</b>		5.0	3.4	mg/L			01/21/17 14:05	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

**Client Sample ID: WGWA-1**

**Lab Sample ID: 400-132828-2**

**Date Collected: 01/17/17 13:35**

**Matrix: Water**

**Date Received: 01/19/17 08:48**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.8</b>		1.0	0.89	mg/L			01/23/17 20:47	1
Fluoride	<0.082		0.20	0.082	mg/L			01/23/17 20:47	1
Sulfate	<0.70		1.0	0.70	mg/L			01/23/17 20:47	1

### 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		01/23/17 08:50	01/26/17 16:34	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/23/17 08:50	01/26/17 16:34	5
<b>Barium</b>	<b>0.044</b>		0.0025	0.00049	mg/L		01/23/17 08:50	01/26/17 16:34	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 16:34	5
Boron	<0.021		0.050	0.021	mg/L		01/23/17 08:50	01/26/17 16:34	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 16:34	5
<b>Calcium</b>	<b>1.4</b>		0.25	0.13	mg/L		01/23/17 08:50	01/26/17 16:34	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/23/17 08:50	01/26/17 16:34	5
<b>Cobalt</b>	<b>0.0010</b>	<b>J</b>	0.0025	0.00040	mg/L		01/23/17 08:50	01/26/17 16:34	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/23/17 08:50	01/26/17 16:34	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/23/17 08:50	01/26/17 16:34	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/23/17 08:50	01/26/17 16:34	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/23/17 08:50	01/26/17 16:34	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/23/17 08:50	01/26/17 16:34	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/23/17 08:50	01/26/17 16:34	5
<b>Vanadium</b>	<b>0.0021</b>	<b>J</b>	0.0025	0.0014	mg/L		01/23/17 08:50	01/26/17 16:34	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/23/17 08:50	01/26/17 16:34	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/23/17 08:50	01/26/17 16:34	5
<b>Zinc</b>	<b>0.012</b>	<b>J</b>	0.020	0.0065	mg/L		01/23/17 08:50	01/26/17 16:34	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		01/25/17 09:21	01/27/17 13:01	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>8.0</b>		5.0	3.4	mg/L			01/21/17 14:05	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

**Client Sample ID: DUP-1**

**Date Collected: 01/17/17 00:00**

**Date Received: 01/19/17 08:48**

**Lab Sample ID: 400-132828-3**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.3		1.0	0.89	mg/L			01/23/17 22:41	1
Fluoride	0.11	J	0.20	0.082	mg/L			01/23/17 22:41	1
Sulfate	2.1		1.0	0.70	mg/L			01/23/17 22:41	1

### 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		01/23/17 08:50	01/26/17 16:38	5
Arsenic	0.0011	J	0.0013	0.00046	mg/L		01/23/17 08:50	01/26/17 16:38	5
Barium	0.018		0.0025	0.00049	mg/L		01/23/17 08:50	01/26/17 16:38	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 16:38	5
Boron	<0.021		0.050	0.021	mg/L		01/23/17 08:50	01/26/17 16:38	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 16:38	5
Calcium	28		0.25	0.13	mg/L		01/23/17 08:50	01/26/17 16:38	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/23/17 08:50	01/26/17 16:38	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/23/17 08:50	01/26/17 16:38	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/23/17 08:50	01/26/17 16:38	5
Lithium	0.0088		0.0050	0.0032	mg/L		01/23/17 08:50	01/26/17 16:38	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/23/17 08:50	01/26/17 16:38	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/23/17 08:50	01/26/17 16:38	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/23/17 08:50	01/26/17 16:38	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/23/17 08:50	01/26/17 16:38	5
Vanadium	0.0043		0.0025	0.0014	mg/L		01/23/17 08:50	01/26/17 16:38	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/23/17 08:50	01/26/17 16:38	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/23/17 08:50	01/26/17 16:38	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/23/17 08:50	01/26/17 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		01/25/17 09:21	01/27/17 13:02	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	110		5.0	3.4	mg/L			01/21/17 14:05	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-132828-4**

**Date Collected: 01/18/17 12:30**

**Matrix: Water**

**Date Received: 01/20/17 09:08**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.5		1.0	0.89	mg/L			01/23/17 21:10	1
Fluoride	0.11	J	0.20	0.082	mg/L			01/23/17 21:10	1
Sulfate	9.4		1.0	0.70	mg/L			01/23/17 21:10	1

### 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		01/23/17 08:50	01/26/17 16:43	5
Arsenic	0.00080	J	0.0013	0.00046	mg/L		01/23/17 08:50	01/26/17 16:43	5
Barium	0.0070		0.0025	0.00049	mg/L		01/23/17 08:50	01/26/17 16:43	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 16:43	5
Boron	<0.021		0.050	0.021	mg/L		01/23/17 08:50	01/26/17 16:43	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 16:43	5
Calcium	26		0.25	0.13	mg/L		01/23/17 08:50	01/26/17 16:43	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/23/17 08:50	01/26/17 16:43	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/23/17 08:50	01/26/17 16:43	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/23/17 08:50	01/26/17 16:43	5
Lithium	0.0046	J	0.0050	0.0032	mg/L		01/23/17 08:50	01/26/17 16:43	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/23/17 08:50	01/26/17 16:43	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/23/17 08:50	01/26/17 16:43	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/23/17 08:50	01/26/17 16:43	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		01/25/17 09:21	01/27/17 13:03	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	120		5.0	3.4	mg/L			01/21/17 14:48	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

**Client Sample ID: WGWA-4**

**Date Collected: 01/18/17 13:50**

**Date Received: 01/20/17 09:08**

**Lab Sample ID: 400-132828-5**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.3		1.0	0.89	mg/L			01/23/17 21:32	1
Fluoride	0.15	J	0.20	0.082	mg/L			01/23/17 21:32	1
Sulfate	5.1		1.0	0.70	mg/L			01/23/17 21:32	1

### 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		01/23/17 08:50	01/26/17 16:47	5
Arsenic	0.0012	J	0.0013	0.00046	mg/L		01/23/17 08:50	01/26/17 16:47	5
Barium	0.0059		0.0025	0.00049	mg/L		01/23/17 08:50	01/26/17 16:47	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 16:47	5
Boron	<0.021		0.050	0.021	mg/L		01/23/17 08:50	01/26/17 16:47	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 16:47	5
Calcium	17		0.25	0.13	mg/L		01/23/17 08:50	01/26/17 16:47	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/23/17 08:50	01/26/17 16:47	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/23/17 08:50	01/26/17 16:47	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/23/17 08:50	01/26/17 16:47	5
Lithium	0.0033	J	0.0050	0.0032	mg/L		01/23/17 08:50	01/26/17 16:47	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/23/17 08:50	01/26/17 16:47	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/23/17 08:50	01/26/17 16:47	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/23/17 08:50	01/26/17 16:47	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		01/25/17 09:21	01/27/17 13:04	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	98		5.0	3.4	mg/L			01/21/17 14:48	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

**Client Sample ID: WGWA-3**

**Lab Sample ID: 400-132828-6**

**Date Collected: 01/18/17 15:15**

**Matrix: Water**

**Date Received: 01/20/17 09:08**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>1.7</b>		1.0	0.89	mg/L			01/23/17 21:55	1
Fluoride	<0.082		0.20	0.082	mg/L			01/23/17 21:55	1
<b>Sulfate</b>	<b>0.99</b>	<b>J</b>	1.0	0.70	mg/L			01/23/17 21:55	1

### 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		01/23/17 08:50	01/26/17 16:52	5
<b>Arsenic</b>	<b>0.00086</b>	<b>J</b>	0.0013	0.00046	mg/L		01/23/17 08:50	01/26/17 16:52	5
<b>Barium</b>	<b>0.014</b>		0.0025	0.00049	mg/L		01/23/17 08:50	01/26/17 16:52	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 16:52	5
Boron	<0.021		0.050	0.021	mg/L		01/23/17 08:50	01/26/17 16:52	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 16:52	5
<b>Calcium</b>	<b>1.7</b>		0.25	0.13	mg/L		01/23/17 08:50	01/26/17 16:52	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/23/17 08:50	01/26/17 16:52	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/23/17 08:50	01/26/17 16:52	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/23/17 08:50	01/26/17 16:52	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/23/17 08:50	01/26/17 16:52	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/23/17 08:50	01/26/17 16:52	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/23/17 08:50	01/26/17 16:52	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/23/17 08:50	01/26/17 16:52	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		01/25/17 09:21	01/27/17 13:06	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>22</b>		5.0	3.4	mg/L			01/21/17 14:48	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

**Client Sample ID: WGWA-7**

**Date Collected: 01/18/17 17:10**

**Date Received: 01/20/17 09:08**

**Lab Sample ID: 400-132828-7**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>1.8</b>		1.0	0.89	mg/L			01/23/17 22:18	1
Fluoride	<0.082		0.20	0.082	mg/L			01/23/17 22:18	1
<b>Sulfate</b>	<b>1.4</b>		1.0	0.70	mg/L			01/23/17 22:18	1

### 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		01/23/17 08:50	01/26/17 16:56	5
<b>Arsenic</b>	<b>0.0010</b>	<b>J</b>	0.0013	0.00046	mg/L		01/23/17 08:50	01/26/17 16:56	5
<b>Barium</b>	<b>0.013</b>		0.0025	0.00049	mg/L		01/23/17 08:50	01/26/17 16:56	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 16:56	5
Boron	<0.021		0.050	0.021	mg/L		01/23/17 08:50	01/26/17 16:56	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 16:56	5
<b>Calcium</b>	<b>10</b>		0.25	0.13	mg/L		01/23/17 08:50	01/26/17 16:56	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/23/17 08:50	01/26/17 16:56	5
<b>Cobalt</b>	<b>0.00097</b>	<b>J</b>	0.0025	0.00040	mg/L		01/23/17 08:50	01/26/17 16:56	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/23/17 08:50	01/26/17 16:56	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/23/17 08:50	01/26/17 16:56	5
<b>Molybdenum</b>	<b>0.0010</b>	<b>J</b>	0.015	0.00085	mg/L		01/23/17 08:50	01/26/17 16:56	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/23/17 08:50	01/26/17 16:56	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/23/17 08:50	01/26/17 16:56	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		01/25/17 09:21	01/27/17 13:07	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>50</b>		5.0	3.4	mg/L			01/21/17 14:48	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

**Client Sample ID: WGWA-5**

**Date Collected: 01/19/17 10:05**

**Date Received: 01/21/17 09:07**

**Lab Sample ID: 400-132828-8**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>1.8</b>		1.0	0.89	mg/L			01/23/17 23:27	1
Fluoride	<0.082		0.20	0.082	mg/L			01/23/17 23:27	1
<b>Sulfate</b>	<b>21</b>		1.0	0.70	mg/L			01/23/17 23:27	1

### 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		01/23/17 08:50	01/26/17 17:19	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/23/17 08:50	01/26/17 17:19	5
<b>Barium</b>	<b>0.034</b>		0.0025	0.00049	mg/L		01/23/17 08:50	01/26/17 17:19	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 17:19	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 17:19	5
<b>Calcium</b>	<b>13</b>		0.25	0.13	mg/L		01/23/17 08:50	01/26/17 17:19	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/23/17 08:50	01/26/17 17:19	5
<b>Cobalt</b>	<b>0.064</b>		0.0025	0.00040	mg/L		01/23/17 08:50	01/26/17 17:19	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/23/17 08:50	01/26/17 17:19	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/23/17 08:50	01/26/17 17:19	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/23/17 08:50	01/26/17 17:19	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/23/17 08:50	01/26/17 17:19	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		01/23/17 08:50	01/27/17 13:41	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/23/17 08:50	01/27/17 13:41	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		01/25/17 09:21	01/27/17 13:17	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>34</b>		5.0	3.4	mg/L			01/24/17 15:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

**Client Sample ID: WGWA-18**

**Date Collected: 01/19/17 13:20**

**Date Received: 01/21/17 09:07**

**Lab Sample ID: 400-132828-9**

**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.0		1.0	0.89	mg/L			01/24/17 00:35	1
Fluoride	0.087	J	0.20	0.082	mg/L			01/24/17 00:35	1
Sulfate	7.4		1.0	0.70	mg/L			01/24/17 00:35	1

**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		01/23/17 08:50	01/26/17 17:23	5
Arsenic	0.00079	J	0.0013	0.00046	mg/L		01/23/17 08:50	01/26/17 17:23	5
Barium	0.012		0.0025	0.00049	mg/L		01/23/17 08:50	01/26/17 17:23	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 17:23	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 17:23	5
Calcium	8.5		0.25	0.13	mg/L		01/23/17 08:50	01/26/17 17:23	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/23/17 08:50	01/26/17 17:23	5
Cobalt	0.0032		0.0025	0.00040	mg/L		01/23/17 08:50	01/26/17 17:23	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/23/17 08:50	01/26/17 17:23	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/23/17 08:50	01/26/17 17:23	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/23/17 08:50	01/26/17 17:23	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/23/17 08:50	01/26/17 17:23	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		01/23/17 08:50	01/27/17 13:46	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/23/17 08:50	01/27/17 13:46	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		01/25/17 09:21	01/27/17 13:18	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	36		5.0	3.4	mg/L			01/24/17 15:02	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

**Client Sample ID: FERB-1**

**Date Collected: 01/19/17 12:00**

**Date Received: 01/21/17 09:07**

**Lab Sample ID: 400-132828-10**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			01/27/17 01:50	1
Fluoride	<0.082		0.20	0.082	mg/L			01/27/17 01:50	1
Sulfate	<0.70		1.0	0.70	mg/L			01/27/17 01:50	1

### 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		01/23/17 08:50	01/26/17 17:28	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/23/17 08:50	01/26/17 17:28	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/23/17 08:50	01/26/17 17:28	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 17:28	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 17:28	5
Calcium	<0.13		0.25	0.13	mg/L		01/23/17 08:50	01/26/17 17:28	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/23/17 08:50	01/26/17 17:28	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/23/17 08:50	01/26/17 17:28	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/23/17 08:50	01/26/17 17:28	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/23/17 08:50	01/26/17 17:28	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/23/17 08:50	01/26/17 17:28	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/23/17 08:50	01/26/17 17:28	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		01/23/17 08:50	01/27/17 13:50	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/23/17 08:50	01/27/17 13:50	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		01/25/17 09:21	01/27/17 13:20	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			01/24/17 15:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

**Client Sample ID: FB-1**

**Date Collected: 01/19/17 13:55**

**Date Received: 01/21/17 09:07**

**Lab Sample ID: 400-132828-11**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			01/27/17 02:13	1
Fluoride	<0.082		0.20	0.082	mg/L			01/27/17 02:13	1
Sulfate	<0.70		1.0	0.70	mg/L			01/27/17 02:13	1

### 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		01/23/17 08:50	01/26/17 17:32	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/23/17 08:50	01/26/17 17:32	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/23/17 08:50	01/26/17 17:32	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 17:32	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 17:32	5
Calcium	<0.13		0.25	0.13	mg/L		01/23/17 08:50	01/26/17 17:32	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/23/17 08:50	01/26/17 17:32	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/23/17 08:50	01/26/17 17:32	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/23/17 08:50	01/26/17 17:32	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/23/17 08:50	01/26/17 17:32	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/23/17 08:50	01/26/17 17:32	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/23/17 08:50	01/26/17 17:32	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		01/23/17 08:50	01/27/17 13:55	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/23/17 08:50	01/27/17 13:55	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		01/25/17 09:21	01/27/17 13:21	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			01/24/17 15:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-132828-12**

**Date Collected: 01/20/17 10:35**

**Matrix: Water**

**Date Received: 01/21/17 09:07**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.5		1.0	0.89	mg/L			01/27/17 02:58	1
Fluoride	0.18	J	0.20	0.082	mg/L			01/27/17 02:58	1
Sulfate	5.3		1.0	0.70	mg/L			01/27/17 02:58	1

### 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		01/23/17 09:20	01/24/17 17:05	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/23/17 09:20	01/24/17 17:05	5
Barium	0.018		0.0025	0.00049	mg/L		01/23/17 09:20	01/24/17 17:05	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/23/17 09:20	01/24/17 17:05	5
Boron	<0.021		0.050	0.021	mg/L		01/23/17 09:20	01/24/17 17:05	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/23/17 09:20	01/24/17 17:05	5
Calcium	10		0.25	0.13	mg/L		01/23/17 09:20	01/24/17 17:05	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/23/17 09:20	01/24/17 17:05	5
Cobalt	0.0014	J	0.0025	0.00040	mg/L		01/23/17 09:20	01/24/17 17:05	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/23/17 09:20	01/24/17 17:05	5
Lithium	0.0044	J	0.0050	0.0032	mg/L		01/23/17 09:20	01/24/17 17:05	5
Molybdenum	0.0094	J	0.015	0.00085	mg/L		01/23/17 09:20	01/24/17 17:05	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/23/17 09:20	01/24/17 17:05	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/23/17 09:20	01/24/17 17:05	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		01/25/17 09:21	01/27/17 13:22	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	82		5.0	3.4	mg/L			01/24/17 15:02	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

## Qualifiers

### HPLC/IC

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.
E	Result exceeded calibration range.

### 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.

## 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 Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

**Client Sample ID: WGWA-2**

**Date Collected: 01/17/17 11:35**

**Date Received: 01/19/17 08:48**

**Lab Sample ID: 400-132828-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339461	01/23/17 19:38	KH1	TAL PEN
Total Recoverable	Prep	3005A			339358	01/23/17 08:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340016	01/26/17 16:29	DRE	TAL PEN
Total/NA	Prep	7470A			339694	01/25/17 09:21	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340132	01/27/17 13:00	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339296	01/21/17 14:05	TET	TAL PEN

**Client Sample ID: WGWA-1**

**Date Collected: 01/17/17 13:35**

**Date Received: 01/19/17 08:48**

**Lab Sample ID: 400-132828-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339461	01/23/17 20:47	KH1	TAL PEN
Total Recoverable	Prep	3005A			339358	01/23/17 08:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340016	01/26/17 16:34	DRE	TAL PEN
Total/NA	Prep	7470A			339694	01/25/17 09:21	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340132	01/27/17 13:01	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339296	01/21/17 14:05	TET	TAL PEN

**Client Sample ID: DUP-1**

**Date Collected: 01/17/17 00:00**

**Date Received: 01/19/17 08:48**

**Lab Sample ID: 400-132828-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339461	01/23/17 22:41	KH1	TAL PEN
Total Recoverable	Prep	3005A			339358	01/23/17 08:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340016	01/26/17 16:38	DRE	TAL PEN
Total/NA	Prep	7470A			339694	01/25/17 09:21	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340132	01/27/17 13:02	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339296	01/21/17 14:05	TET	TAL PEN

**Client Sample ID: WGWA-6**

**Date Collected: 01/18/17 12:30**

**Date Received: 01/20/17 09:08**

**Lab Sample ID: 400-132828-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339461	01/23/17 21:10	KH1	TAL PEN
Total Recoverable	Prep	3005A			339358	01/23/17 08:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340016	01/26/17 16:43	DRE	TAL PEN
Total/NA	Prep	7470A			339694	01/25/17 09:21	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340132	01/27/17 13:03	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339298	01/21/17 14:48	TET	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-132828-5**

**Date Collected: 01/18/17 13:50**

**Matrix: Water**

**Date Received: 01/20/17 09:08**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339461	01/23/17 21:32	KH1	TAL PEN
Total Recoverable	Prep	3005A			339358	01/23/17 08:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340016	01/26/17 16:47	DRE	TAL PEN
Total/NA	Prep	7470A			339694	01/25/17 09:21	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340132	01/27/17 13:04	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339298	01/21/17 14:48	TET	TAL PEN

**Client Sample ID: WGWA-3**

**Lab Sample ID: 400-132828-6**

**Date Collected: 01/18/17 15:15**

**Matrix: Water**

**Date Received: 01/20/17 09:08**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339461	01/23/17 21:55	KH1	TAL PEN
Total Recoverable	Prep	3005A			339358	01/23/17 08:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340016	01/26/17 16:52	DRE	TAL PEN
Total/NA	Prep	7470A			339694	01/25/17 09:21	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340132	01/27/17 13:06	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339298	01/21/17 14:48	TET	TAL PEN

**Client Sample ID: WGWA-7**

**Lab Sample ID: 400-132828-7**

**Date Collected: 01/18/17 17:10**

**Matrix: Water**

**Date Received: 01/20/17 09:08**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339461	01/23/17 22:18	KH1	TAL PEN
Total Recoverable	Prep	3005A			339358	01/23/17 08:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340016	01/26/17 16:56	DRE	TAL PEN
Total/NA	Prep	7470A			339694	01/25/17 09:21	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340132	01/27/17 13:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339298	01/21/17 14:48	TET	TAL PEN

**Client Sample ID: WGWA-5**

**Lab Sample ID: 400-132828-8**

**Date Collected: 01/19/17 10:05**

**Matrix: Water**

**Date Received: 01/21/17 09:07**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339461	01/23/17 23:27	KH1	TAL PEN
Total Recoverable	Prep	3005A			339358	01/23/17 08:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340016	01/26/17 17:19	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		339358	01/23/17 08:50	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	340236	01/27/17 13:41	DRE	TAL PEN
Total/NA	Prep	7470A			339694	01/25/17 09:21	JAP	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

**Client Sample ID: WGWA-5**

**Lab Sample ID: 400-132828-8**

**Date Collected: 01/19/17 10:05**

**Matrix: Water**

**Date Received: 01/21/17 09:07**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7470A		1	340132	01/27/17 13:17	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339598	01/24/17 15:02	RRC	TAL PEN

**Client Sample ID: WGWA-18**

**Lab Sample ID: 400-132828-9**

**Date Collected: 01/19/17 13:20**

**Matrix: Water**

**Date Received: 01/21/17 09:07**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339461	01/24/17 00:35	KH1	TAL PEN
Total Recoverable	Prep	3005A			339358	01/23/17 08:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340016	01/26/17 17:23	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		339358	01/23/17 08:50	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	340236	01/27/17 13:46	DRE	TAL PEN
Total/NA	Prep	7470A			339694	01/25/17 09:21	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340132	01/27/17 13:18	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339598	01/24/17 15:02	RRC	TAL PEN

**Client Sample ID: FERB-1**

**Lab Sample ID: 400-132828-10**

**Date Collected: 01/19/17 12:00**

**Matrix: Water**

**Date Received: 01/21/17 09:07**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340093	01/27/17 01:50	KH1	TAL PEN
Total Recoverable	Prep	3005A			339358	01/23/17 08:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340016	01/26/17 17:28	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		339358	01/23/17 08:50	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	340236	01/27/17 13:50	DRE	TAL PEN
Total/NA	Prep	7470A			339694	01/25/17 09:21	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340132	01/27/17 13:20	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339598	01/24/17 15:02	RRC	TAL PEN

**Client Sample ID: FB-1**

**Lab Sample ID: 400-132828-11**

**Date Collected: 01/19/17 13:55**

**Matrix: Water**

**Date Received: 01/21/17 09:07**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340093	01/27/17 02:13	KH1	TAL PEN
Total Recoverable	Prep	3005A			339358	01/23/17 08:50	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340016	01/26/17 17:32	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		339358	01/23/17 08:50	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	340236	01/27/17 13:55	DRE	TAL PEN
Total/NA	Prep	7470A			339694	01/25/17 09:21	JAP	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

**Client Sample ID: FB-1**

**Lab Sample ID: 400-132828-11**

**Date Collected: 01/19/17 13:55**

**Matrix: Water**

**Date Received: 01/21/17 09:07**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7470A		1	340132	01/27/17 13:21	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339598	01/24/17 15:02	RRC	TAL PEN

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-132828-12**

**Date Collected: 01/20/17 10:35**

**Matrix: Water**

**Date Received: 01/21/17 09:07**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340093	01/27/17 02:58	KH1	TAL PEN
Total Recoverable	Prep	3005A			339359	01/23/17 09:20	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339677	01/24/17 17:05	RJB	TAL PEN
Total/NA	Prep	7470A			339694	01/25/17 09:21	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340132	01/27/17 13:22	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339598	01/24/17 15:02	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 Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

## HPLC/IC

### Analysis Batch: 339461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-1	WGWA-2	Total/NA	Water	300.0	
400-132828-2	WGWA-1	Total/NA	Water	300.0	
400-132828-3	DUP-1	Total/NA	Water	300.0	
400-132828-4	WGWA-6	Total/NA	Water	300.0	
400-132828-5	WGWA-4	Total/NA	Water	300.0	
400-132828-6	WGWA-3	Total/NA	Water	300.0	
400-132828-7	WGWA-7	Total/NA	Water	300.0	
400-132828-8	WGWA-5	Total/NA	Water	300.0	
400-132828-9	WGWA-18	Total/NA	Water	300.0	
MB 400-339461/4	Method Blank	Total/NA	Water	300.0	
LCS 400-339461/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-339461/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-132834-D-1 MS	Matrix Spike	Total/NA	Water	300.0	
400-132834-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 340093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-10	FERB-1	Total/NA	Water	300.0	
400-132828-11	FB-1	Total/NA	Water	300.0	
400-132828-12	WGWC-17	Total/NA	Water	300.0	
MB 400-340093/3	Method Blank	Total/NA	Water	300.0	
LCS 400-340093/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-340093/5	Lab Control Sample Dup	Total/NA	Water	300.0	
400-132731-B-6 MS	Matrix Spike	Total/NA	Water	300.0	
400-132731-B-6 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

## Metals

### Prep Batch: 339358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-1	WGWA-2	Total Recoverable	Water	3005A	
400-132828-2	WGWA-1	Total Recoverable	Water	3005A	
400-132828-3	DUP-1	Total Recoverable	Water	3005A	
400-132828-4	WGWA-6	Total Recoverable	Water	3005A	
400-132828-5	WGWA-4	Total Recoverable	Water	3005A	
400-132828-6	WGWA-3	Total Recoverable	Water	3005A	
400-132828-7	WGWA-7	Total Recoverable	Water	3005A	
400-132828-8 - RA	WGWA-5	Total Recoverable	Water	3005A	
400-132828-8	WGWA-5	Total Recoverable	Water	3005A	
400-132828-9	WGWA-18	Total Recoverable	Water	3005A	
400-132828-9 - RA	WGWA-18	Total Recoverable	Water	3005A	
400-132828-10	FERB-1	Total Recoverable	Water	3005A	
400-132828-10 - RA	FERB-1	Total Recoverable	Water	3005A	
400-132828-11	FB-1	Total Recoverable	Water	3005A	
400-132828-11 - RA	FB-1	Total Recoverable	Water	3005A	
MB 400-339358/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-339358/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-132890-A-2-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-132890-A-2-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

## Metals (Continued)

### Prep Batch: 339359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-12	WGWC-17	Total Recoverable	Water	3005A	
MB 400-339359/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-339359/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-132733-B-14-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-132733-B-14-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Analysis Batch: 339677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-12	WGWC-17	Total Recoverable	Water	6020	339359
MB 400-339359/1-A ^5	Method Blank	Total Recoverable	Water	6020	339359
LCS 400-339359/2-A	Lab Control Sample	Total Recoverable	Water	6020	339359
400-132733-B-14-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	339359
400-132733-B-14-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	339359

### Prep Batch: 339694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-1	WGWA-2	Total/NA	Water	7470A	
400-132828-2	WGWA-1	Total/NA	Water	7470A	
400-132828-3	DUP-1	Total/NA	Water	7470A	
400-132828-4	WGWA-6	Total/NA	Water	7470A	
400-132828-5	WGWA-4	Total/NA	Water	7470A	
400-132828-6	WGWA-3	Total/NA	Water	7470A	
400-132828-7	WGWA-7	Total/NA	Water	7470A	
400-132828-8	WGWA-5	Total/NA	Water	7470A	
400-132828-9	WGWA-18	Total/NA	Water	7470A	
400-132828-10	FERB-1	Total/NA	Water	7470A	
400-132828-11	FB-1	Total/NA	Water	7470A	
400-132828-12	WGWC-17	Total/NA	Water	7470A	
MB 400-339694/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-339694/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-132731-C-10-C MS	Matrix Spike	Total/NA	Water	7470A	
400-132731-C-10-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

### Analysis Batch: 340016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-1	WGWA-2	Total Recoverable	Water	6020	339358
400-132828-2	WGWA-1	Total Recoverable	Water	6020	339358
400-132828-3	DUP-1	Total Recoverable	Water	6020	339358
400-132828-4	WGWA-6	Total Recoverable	Water	6020	339358
400-132828-5	WGWA-4	Total Recoverable	Water	6020	339358
400-132828-6	WGWA-3	Total Recoverable	Water	6020	339358
400-132828-7	WGWA-7	Total Recoverable	Water	6020	339358
400-132828-8	WGWA-5	Total Recoverable	Water	6020	339358
400-132828-9	WGWA-18	Total Recoverable	Water	6020	339358
400-132828-10	FERB-1	Total Recoverable	Water	6020	339358
400-132828-11	FB-1	Total Recoverable	Water	6020	339358
MB 400-339358/1-A ^5	Method Blank	Total Recoverable	Water	6020	339358
LCS 400-339358/2-A	Lab Control Sample	Total Recoverable	Water	6020	339358
400-132890-A-2-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	339358
400-132890-A-2-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	339358

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

## Metals (Continued)

### Analysis Batch: 340132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-1	WGWA-2	Total/NA	Water	7470A	339694
400-132828-2	WGWA-1	Total/NA	Water	7470A	339694
400-132828-3	DUP-1	Total/NA	Water	7470A	339694
400-132828-4	WGWA-6	Total/NA	Water	7470A	339694
400-132828-5	WGWA-4	Total/NA	Water	7470A	339694
400-132828-6	WGWA-3	Total/NA	Water	7470A	339694
400-132828-7	WGWA-7	Total/NA	Water	7470A	339694
400-132828-8	WGWA-5	Total/NA	Water	7470A	339694
400-132828-9	WGWA-18	Total/NA	Water	7470A	339694
400-132828-10	FERB-1	Total/NA	Water	7470A	339694
400-132828-11	FB-1	Total/NA	Water	7470A	339694
400-132828-12	WGWC-17	Total/NA	Water	7470A	339694
MB 400-339694/14-A	Method Blank	Total/NA	Water	7470A	339694
LCS 400-339694/15-A	Lab Control Sample	Total/NA	Water	7470A	339694
400-132731-C-10-C MS	Matrix Spike	Total/NA	Water	7470A	339694
400-132731-C-10-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	339694

### Analysis Batch: 340236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-8 - RA	WGWA-5	Total Recoverable	Water	6020	339358
400-132828-9 - RA	WGWA-18	Total Recoverable	Water	6020	339358
400-132828-10 - RA	FERB-1	Total Recoverable	Water	6020	339358
400-132828-11 - RA	FB-1	Total Recoverable	Water	6020	339358

## General Chemistry

### Analysis Batch: 339296

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-1	WGWA-2	Total/NA	Water	SM 2540C	
400-132828-2	WGWA-1	Total/NA	Water	SM 2540C	
400-132828-3	DUP-1	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	
400-132810-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	

### Analysis Batch: 339298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-4	WGWA-6	Total/NA	Water	SM 2540C	
400-132828-5	WGWA-4	Total/NA	Water	SM 2540C	
400-132828-6	WGWA-3	Total/NA	Water	SM 2540C	
400-132828-7	WGWA-7	Total/NA	Water	SM 2540C	
MB 400-339298/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-339298/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-132910-C-1 DU	Duplicate	Total/NA	Water	SM 2540C	

### Analysis Batch: 339598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-8	WGWA-5	Total/NA	Water	SM 2540C	
400-132828-9	WGWA-18	Total/NA	Water	SM 2540C	
400-132828-10	FERB-1	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

## General Chemistry (Continued)

### Analysis Batch: 339598 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-11	FB-1	Total/NA	Water	SM 2540C	
400-132828-12	WGWC-17	Total/NA	Water	SM 2540C	
MB 400-339598/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-339598/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-132829-B-5 DU	Duplicate	Total/NA	Water	SM 2540C	
400-132829-B-7 DU	Duplicate	Total/NA	Water	SM 2540C	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 400-339461/4**  
**Matrix: Water**  
**Analysis Batch: 339461**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			01/23/17 13:10	1
Fluoride	<0.082		0.20	0.082	mg/L			01/23/17 13:10	1
Sulfate	<0.70		1.0	0.70	mg/L			01/23/17 13:10	1

**Lab Sample ID: LCS 400-339461/5**  
**Matrix: Water**  
**Analysis Batch: 339461**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.6		mg/L		106	90 - 110
Fluoride	10.0	9.51		mg/L		95	90 - 110
Sulfate	10.0	10.8		mg/L		108	90 - 110

**Lab Sample ID: LCSD 400-339461/6**  
**Matrix: Water**  
**Analysis Batch: 339461**

**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	10.0	10.5		mg/L		105	90 - 110	1	15
Fluoride	10.0	11.0		mg/L		110	90 - 110	15	15
Sulfate	10.0	10.6		mg/L		106	90 - 110	2	15

**Lab Sample ID: 400-132834-D-1 MS**  
**Matrix: Water**  
**Analysis Batch: 339461**

**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	740	E	100	796	E 4	mg/L		58	80 - 120
Fluoride	<0.82		100	112		mg/L		112	80 - 120
Sulfate	7.2	J	100	115		mg/L		108	80 - 120

**Lab Sample ID: 400-132834-D-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 339461**

**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	740	E	100	796	E 4	mg/L		57	80 - 120	0	20
Fluoride	<0.82		100	112		mg/L		112	80 - 120	0	20
Sulfate	7.2	J	100	115		mg/L		108	80 - 120	0	20

**Lab Sample ID: MB 400-340093/3**  
**Matrix: Water**  
**Analysis Batch: 340093**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			01/26/17 19:45	1
Fluoride	<0.082		0.20	0.082	mg/L			01/26/17 19:45	1
Sulfate	<0.70		1.0	0.70	mg/L			01/26/17 19:45	1

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 400-340093/4**  
**Matrix: Water**  
**Analysis Batch: 340093**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.87		mg/L		99	90 - 110
Fluoride	10.0	10.4		mg/L		104	90 - 110
Sulfate	10.0	10.2		mg/L		102	90 - 110

**Lab Sample ID: LCSD 400-340093/5**  
**Matrix: Water**  
**Analysis Batch: 340093**

**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	10.0	9.79		mg/L		98	90 - 110	1	15
Fluoride	10.0	10.3		mg/L		103	90 - 110	1	15
Sulfate	10.0	10.2		mg/L		102	90 - 110	0	15

**Lab Sample ID: 400-132731-B-6 MS**  
**Matrix: Water**  
**Analysis Batch: 340093**

**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	10		50.0	58.0		mg/L		96	80 - 120
Fluoride	<0.41		50.0	52.7		mg/L		105	80 - 120
Sulfate	150		50.0	195		mg/L		83	80 - 120

**Lab Sample ID: 400-132731-B-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 340093**

**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	10		50.0	58.0		mg/L		96	80 - 120	0	20
Fluoride	<0.41		50.0	52.7		mg/L		105	80 - 120	0	20
Sulfate	150		50.0	195		mg/L		83	80 - 120	0	20

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

**Lab Sample ID: MB 400-339358/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 340016**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 339358**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/23/17 08:50	01/26/17 14:36	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/23/17 08:50	01/26/17 14:36	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/23/17 08:50	01/26/17 14:36	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 14:36	5
Boron	<0.021		0.050	0.021	mg/L		01/23/17 08:50	01/26/17 14:36	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/23/17 08:50	01/26/17 14:36	5
Calcium	<0.13		0.25	0.13	mg/L		01/23/17 08:50	01/26/17 14:36	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/23/17 08:50	01/26/17 14:36	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/23/17 08:50	01/26/17 14:36	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/23/17 08:50	01/26/17 14:36	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/23/17 08:50	01/26/17 14:36	5

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

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

**Lab Sample ID: MB 400-339358/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 340016**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 339358**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/23/17 08:50	01/26/17 14:36	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/23/17 08:50	01/26/17 14:36	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/23/17 08:50	01/26/17 14:36	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/23/17 08:50	01/26/17 14:36	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/23/17 08:50	01/26/17 14:36	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/23/17 08:50	01/26/17 14:36	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/23/17 08:50	01/26/17 14:36	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/23/17 08:50	01/26/17 14:36	5

**Lab Sample ID: LCS 400-339358/2-A**  
**Matrix: Water**  
**Analysis Batch: 340016**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 339358**

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	0.0523		mg/L		105	80 - 120
Barium	0.0500	0.0521		mg/L		104	80 - 120
Beryllium	0.0500	0.0523		mg/L		105	80 - 120
Boron	0.100	0.103		mg/L		103	80 - 120
Cadmium	0.0500	0.0523		mg/L		105	80 - 120
Calcium	5.00	5.03		mg/L		101	80 - 120
Chromium	0.0500	0.0514		mg/L		103	80 - 120
Cobalt	0.0500	0.0515		mg/L		103	80 - 120
Lead	0.0500	0.0532		mg/L		106	80 - 120
Lithium	0.0500	0.0535		mg/L		107	80 - 120
Molybdenum	0.100	0.103		mg/L		103	80 - 120
Selenium	0.0500	0.0510		mg/L		102	80 - 120
Thallium	0.0100	0.0103		mg/L		103	80 - 120
Nickel	0.0500	0.0517		mg/L		103	80 - 120
Vanadium	0.0500	0.0507		mg/L		101	80 - 120
Silver	0.0500	0.0551		mg/L		110	80 - 120
Copper	0.0500	0.0493		mg/L		99	80 - 120
Zinc	0.0500	0.0516		mg/L		103	80 - 120

**Lab Sample ID: 400-132890-A-2-B MS ^5**  
**Matrix: Water**  
**Analysis Batch: 340016**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 339358**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0538		mg/L		108	75 - 125
Arsenic	0.026		0.0500	0.0791		mg/L		106	75 - 125
Barium	0.087		0.0500	0.139		mg/L		104	75 - 125
Beryllium	<0.00034		0.0500	0.0541		mg/L		108	75 - 125
Boron	0.26		0.100	0.367		mg/L		110	75 - 125
Cadmium	<0.00034		0.0500	0.0519		mg/L		104	75 - 125
Calcium	8.7		5.00	13.6		mg/L		99	75 - 125
Chromium	0.011		0.0500	0.0628		mg/L		103	75 - 125
Cobalt	0.0020	J	0.0500	0.0551		mg/L		106	75 - 125
Lead	<0.00035		0.0500	0.0538		mg/L		108	75 - 125

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

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

**Lab Sample ID: 400-132890-A-2-B MS ^5**  
**Matrix: Water**  
**Analysis Batch: 340016**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 339358**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	<0.0032		0.0500	0.0544		mg/L		109	75 - 125
Molybdenum	0.0020	J	0.100	0.106		mg/L		104	75 - 125
Selenium	<0.00024		0.0500	0.0523		mg/L		105	75 - 125
Thallium	<0.000085		0.0100	0.0104		mg/L		104	75 - 125
Nickel	0.0074		0.0500	0.0605		mg/L		106	75 - 125
Vanadium	<0.0014		0.0500	0.0519		mg/L		104	75 - 125
Silver	<0.00011		0.0500	0.0550		mg/L		110	75 - 125
Copper	<0.0021		0.0500	0.0504		mg/L		101	75 - 125
Zinc	<0.0065		0.0500	0.0527		mg/L		105	75 - 125

**Lab Sample ID: 400-132890-A-2-C MSD ^5**  
**Matrix: Water**  
**Analysis Batch: 340016**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 339358**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0522		mg/L		104	75 - 125	3	20
Arsenic	0.026		0.0500	0.0782		mg/L		104	75 - 125	1	20
Barium	0.087		0.0500	0.138		mg/L		102	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0551		mg/L		110	75 - 125	2	20
Boron	0.26		0.100	0.361		mg/L		104	75 - 125	2	20
Cadmium	<0.00034		0.0500	0.0532		mg/L		106	75 - 125	2	20
Calcium	8.7		5.00	13.3		mg/L		93	75 - 125	2	20
Chromium	0.011		0.0500	0.0625		mg/L		102	75 - 125	0	20
Cobalt	0.0020	J	0.0500	0.0544		mg/L		105	75 - 125	1	20
Lead	<0.00035		0.0500	0.0537		mg/L		107	75 - 125	0	20
Lithium	<0.0032		0.0500	0.0532		mg/L		106	75 - 125	2	20
Molybdenum	0.0020	J	0.100	0.103		mg/L		101	75 - 125	2	20
Selenium	<0.00024		0.0500	0.0531		mg/L		106	75 - 125	2	20
Thallium	<0.000085		0.0100	0.0104		mg/L		104	75 - 125	1	20
Nickel	0.0074		0.0500	0.0601		mg/L		105	75 - 125	1	20
Vanadium	<0.0014		0.0500	0.0513		mg/L		103	75 - 125	1	20
Silver	<0.00011		0.0500	0.0544		mg/L		109	75 - 125	1	20
Copper	<0.0021		0.0500	0.0501		mg/L		100	75 - 125	1	20
Zinc	<0.0065		0.0500	0.0498		mg/L		100	75 - 125	6	20

**Lab Sample ID: MB 400-339359/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 339677**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 339359**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/23/17 09:20	01/24/17 16:56	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/23/17 09:20	01/24/17 16:56	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/23/17 09:20	01/24/17 16:56	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/23/17 09:20	01/24/17 16:56	5
Boron	<0.021		0.050	0.021	mg/L		01/23/17 09:20	01/24/17 16:56	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/23/17 09:20	01/24/17 16:56	5
Calcium	<0.13		0.25	0.13	mg/L		01/23/17 09:20	01/24/17 16:56	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/23/17 09:20	01/24/17 16:56	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/23/17 09:20	01/24/17 16:56	5

TestAmerica Pensacola



# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

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

**Lab Sample ID: MB 400-339359/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 339677**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 339359**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.00035		0.0013	0.00035	mg/L		01/23/17 09:20	01/24/17 16:56	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/23/17 09:20	01/24/17 16:56	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/23/17 09:20	01/24/17 16:56	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/23/17 09:20	01/24/17 16:56	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/23/17 09:20	01/24/17 16:56	5
Nickel	<0.0018		0.0025	0.0018	mg/L		01/23/17 09:20	01/24/17 16:56	5
Vanadium	<0.0014		0.0025	0.0014	mg/L		01/23/17 09:20	01/24/17 16:56	5
Silver	<0.00011		0.00025	0.00011	mg/L		01/23/17 09:20	01/24/17 16:56	5
Copper	<0.0021		0.0025	0.0021	mg/L		01/23/17 09:20	01/24/17 16:56	5
Zinc	<0.0065		0.020	0.0065	mg/L		01/23/17 09:20	01/24/17 16:56	5

**Lab Sample ID: LCS 400-339359/2-A**  
**Matrix: Water**  
**Analysis Batch: 339677**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 339359**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0533		mg/L		107	80 - 120
Arsenic	0.0500	0.0508		mg/L		102	80 - 120
Barium	0.0500	0.0529		mg/L		106	80 - 120
Beryllium	0.0500	0.0546		mg/L		109	80 - 120
Boron	0.100	0.0986		mg/L		99	80 - 120
Cadmium	0.0500	0.0523		mg/L		105	80 - 120
Calcium	5.00	4.82		mg/L		96	80 - 120
Chromium	0.0500	0.0492		mg/L		98	80 - 120
Cobalt	0.0500	0.0480		mg/L		96	80 - 120
Lead	0.0500	0.0519		mg/L		104	80 - 120
Lithium	0.0500	0.0524		mg/L		105	80 - 120
Molybdenum	0.100	0.103		mg/L		103	80 - 120
Selenium	0.0500	0.0497		mg/L		99	80 - 120
Thallium	0.0100	0.0107		mg/L		107	80 - 120
Nickel	0.0500	0.0496		mg/L		99	80 - 120
Vanadium	0.0500	0.0490		mg/L		98	80 - 120
Silver	0.0500	0.0522		mg/L		104	80 - 120
Copper	0.0500	0.0501		mg/L		100	80 - 120
Zinc	0.0500	0.0502		mg/L		100	80 - 120

**Lab Sample ID: 400-132733-B-14-B MS ^5**  
**Matrix: Water**  
**Analysis Batch: 339677**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 339359**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0523		mg/L		105	75 - 125
Arsenic	<0.00046		0.0500	0.0509		mg/L		102	75 - 125
Barium	0.081		0.0500	0.134		mg/L		105	75 - 125
Beryllium	0.00034	J	0.0500	0.0577		mg/L		115	75 - 125
Boron	<0.021		0.100	0.111		mg/L		111	75 - 125
Cadmium	<0.00034		0.0500	0.0514		mg/L		103	75 - 125
Calcium	1.8		5.00	6.79		mg/L		100	75 - 125
Chromium	<0.0011		0.0500	0.0496		mg/L		99	75 - 125

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

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

**Lab Sample ID: 400-132733-B-14-B MS ^5**  
**Matrix: Water**  
**Analysis Batch: 339677**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 339359**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.0047		0.0500	0.0537		mg/L		98	75 - 125
Lead	<0.00035		0.0500	0.0533		mg/L		107	75 - 125
Lithium	<0.0032		0.0500	0.0565		mg/L		113	75 - 125
Molybdenum	<0.00085		0.100	0.102		mg/L		102	75 - 125
Selenium	<0.00024		0.0500	0.0497		mg/L		99	75 - 125
Thallium	<0.000085		0.0100	0.0108		mg/L		108	75 - 125
Nickel	0.0036		0.0500	0.0536		mg/L		100	75 - 125
Vanadium	<0.0014		0.0500	0.0493		mg/L		99	75 - 125
Silver	<0.00011		0.0500	0.0529		mg/L		106	75 - 125
Copper	<0.0021		0.0500	0.0512		mg/L		102	75 - 125
Zinc	0.022		0.0500	0.0662		mg/L		87	75 - 125

**Lab Sample ID: 400-132733-B-14-C MSD ^5**  
**Matrix: Water**  
**Analysis Batch: 339677**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 339359**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	<0.0010		0.0500	0.0536		mg/L		107	75 - 125	2	20
Arsenic	<0.00046		0.0500	0.0520		mg/L		104	75 - 125	2	20
Barium	0.081		0.0500	0.136		mg/L		109	75 - 125	1	20
Beryllium	0.00034	J	0.0500	0.0580		mg/L		115	75 - 125	1	20
Boron	<0.021		0.100	0.110		mg/L		110	75 - 125	1	20
Cadmium	<0.00034		0.0500	0.0551		mg/L		110	75 - 125	7	20
Calcium	1.8		5.00	6.83		mg/L		101	75 - 125	1	20
Chromium	<0.0011		0.0500	0.0505		mg/L		101	75 - 125	2	20
Cobalt	0.0047		0.0500	0.0543		mg/L		99	75 - 125	1	20
Lead	<0.00035		0.0500	0.0526		mg/L		105	75 - 125	1	20
Lithium	<0.0032		0.0500	0.0588		mg/L		118	75 - 125	4	20
Molybdenum	<0.00085		0.100	0.104		mg/L		104	75 - 125	2	20
Selenium	<0.00024		0.0500	0.0506		mg/L		101	75 - 125	2	20
Thallium	<0.000085		0.0100	0.0108		mg/L		108	75 - 125	1	20
Nickel	0.0036		0.0500	0.0559		mg/L		105	75 - 125	4	20
Vanadium	<0.0014		0.0500	0.0505		mg/L		101	75 - 125	2	20
Silver	<0.00011		0.0500	0.0540		mg/L		108	75 - 125	2	20
Copper	<0.0021		0.0500	0.0520		mg/L		104	75 - 125	2	20
Zinc	0.022		0.0500	0.0696		mg/L		94	75 - 125	5	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 400-339694/14-A**  
**Matrix: Water**  
**Analysis Batch: 340132**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 339694**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/25/17 09:17	01/27/17 12:30	1

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

## Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID: LCS 400-339694/15-A**  
**Matrix: Water**  
**Analysis Batch: 340132**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 339694**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00103		mg/L		102	80 - 120

**Lab Sample ID: 400-132731-C-10-C MS**  
**Matrix: Water**  
**Analysis Batch: 340132**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 339694**

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

**Lab Sample ID: 400-132731-C-10-D MSD**  
**Matrix: Water**  
**Analysis Batch: 340132**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 339694**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00201		mg/L		100	80 - 120	6	20

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

**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	Limits
Total Dissolved Solids	293	254		mg/L		87	78 - 122

**Lab Sample ID: 400-132810-A-1 DU**  
**Matrix: Water**  
**Analysis Batch: 339296**

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	<3.4		<3.4		mg/L		NC	5

**Lab Sample ID: MB 400-339298/1**  
**Matrix: Water**  
**Analysis Batch: 339298**

**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 14:48	1

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
 SDG: Ash Pond

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

**Lab Sample ID: LCS 400-339298/2**  
**Matrix: Water**  
**Analysis Batch: 339298**

**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	234		mg/L		80	78 - 122

**Lab Sample ID: 400-132910-C-1 DU**  
**Matrix: Water**  
**Analysis Batch: 339298**

**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	2400		2390		mg/L		0	5

**Lab Sample ID: MB 400-339598/1**  
**Matrix: Water**  
**Analysis Batch: 339598**

**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			01/24/17 15:02	1

**Lab Sample ID: LCS 400-339598/2**  
**Matrix: Water**  
**Analysis Batch: 339598**

**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: 400-132829-B-5 DU**  
**Matrix: Water**  
**Analysis Batch: 339598**

**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	28		28.0		mg/L		0	5

**Lab Sample ID: 400-132829-B-7 DU**  
**Matrix: Water**  
**Analysis Batch: 339598**

**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	38		38.0		mg/L		0	5

**TestAmerica Pensacola**  
 3365 McLemore Drive  
 Pensacola, FL 32514  
 Phone (850) 474-1001 Fax (850) 478-2671

**Chain of Custody Record**

**TestAmerica**

Lab File: \_\_\_\_\_  
 Carrier Tracking No(s): \_\_\_\_\_  
 Page: \_\_\_\_\_  
 Lab #: \_\_\_\_\_

Client Information  
 Client Contact: \_\_\_\_\_  
 Jody Abraham  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State: GA, ZIP: 30508  
 Phone: 404-506-7233  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Size: CCR

**Analysis Requested**

400-132828 COC

QR Code: [Image]

Preservation Codes:  
 M - Hexane  
 N - None  
 O - Ash/D2  
 P - Na2SO4  
 Q - Na2SO3  
 R - Na2SO3  
 S - H2SO4  
 T - TSP Dodecylhydrate  
 U - Acetone  
 V - MCAA  
 W - PH 4.5  
 Z - other (specify)

Special Instructions/Notes:

Sample ID	Sample Date	Sample Time	Sample Type (C-comb, G-grab)	Matrix (W-water, S-sediment, D-dust, A-air)	Analysis Requested	Retention	Disposition
WGWA-2	1/17/17	1135	G	W	TSS - SM 2640C   Cl.F.S04 - EPA 300	X	X
WGWA-1	1/17/17	1335	G	W	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	X	X
DUP-1	1/17/17	-	G	W	Metals State Permit (EPA 6020)	X	X

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Unknown  Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Returned by: \_\_\_\_\_  
 Date: \_\_\_\_\_

Received by: \_\_\_\_\_  
 Date/Time: 01/18/2017 14:45  
 Company: BOK

Received by: \_\_\_\_\_  
 Date/Time: 1/18/17 8:48  
 Company: BOK

Received by: \_\_\_\_\_  
 Date/Time: 1/18/17 16:55  
 Company: BOK

Custody Seals Intact: \_\_\_\_\_  
 A Yes Δ No

Custody Seal No.: 3.7°C JAC 6



**TestAmerica Pensacola**  
 3855 McLemore Drive  
 Pensacola, FL 32514  
 Phone (850) 474-1001 Fax (850) 478-2671

**Chain of Custody Record**

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information  
 Client Contact: Joji Abraham  
 Southern Company  
 Address: 241 Reich McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7238  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wensley - Ash Pond  
 Site: CCR

Sample Information  
 Sampler: A. Shoreills ASH, Thomas WT  
 Lab POC: Whitmore, Cheryenne R.  
 Phone: [Blank]  
 Email: cheryenne.whitmore@testamerica.com

Due Date Requested: [Blank]  
 TAT Requested (days): [Blank]

Sample Date	Sample Time (G-grab)	Sample Type (C-comp, G-grab)	Matrix (W-water, S-sediment, O-organic, I-inorganic, A-air)
1/18/17	1230	G	W
1/18/17	1350	G	W
1/18/17	1515	G	W
1/18/17	1710	G	W

Analysis Requested  
 TPS - SM 2840C (C,F,S,O4 - EPA 300)  
 Metals - Part 257 Appendix III & IV EPA 8020 & EPA 7470  
 Radium 226 & 228 - SM-446 9816 & 9920

Sample ID	Sample Date	Sample Time	Sample Type	Matrix	TPS - SM 2840C	Metals	Radium	Special Instructions/Note
WGWA-6	1/18/17	1230	G	W	X	X	X	
WGWA-4	1/18/17	1350	G	W	X	X	X	
WGWA-3	1/18/17	1515	G	W	X	X	X	
WGWA-7	1/18/17	1710	G	W	X	X	X	

Preservation Codes:  
 M - Hucose  
 N - None  
 O - ASHCO2  
 P - N2O4S  
 Q - N2S2O3S  
 R - N2S2O3S  
 S - H2SO4  
 T - TSP Dodecahydrate  
 U - Acetone  
 V - MCAA  
 W - pH 4.5  
 X - EDTA  
 L - EDTA  
 Z - other (specify)

Special Instructions/OC Requirements:  
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months  
 Special Instructions/OC Requirements:  
 Method of Statement:  
 Date: 1/18/17 / 1355  
 Date Time: 1/18/17 1355  
 Date Time: 1/19/17 1630  
 Date Time: 1/20/17 908  
 Cooler Temperature (°C) and Other Remarks: 0.0°C IR7



**Chain of Custody Record**

**TestAmerica Pensacola**  
3335 McLemore Drive  
Pensacola, FL 32514  
Phone (850) 474-1001 Fax (850) 478-2871

**Client Information**  
 Client Contact: Whitnira, Cheyenne R  
 Phone: cheyenne.whitnira@testamerica.com  
 Lab Pk: Whitnira, Cheyenne R  
 Email: cheyenne.whitnira@testamerica.com  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

**Analysis Requested**  
 Due Date Requested:  
 TAT Requested (days):  
 PO #: 404-506-7239  
 WO #: JAbraham@southernco.com  
 Project #: Plant Wansley - Ash Pond  
 SSOW#:  
 Matrix: CCR

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=sediment, O=soil, G=grab, ET=Environmental)	Analysis Requested	Carrier Tracking No(s)
WGWA-5	1/19/17	1005	G	W	TDS - SM 2540c; Cl, F, SO4 - EPA 300	40CL-132828 COC
WGWA-18	1/19/17	1320	G	W	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	
FERB-1	1/18/17	1200	G	W		
FB-1	1/19/17	1355	G	W		

**Special Instructions/Note:**  
 Preservation Codes:  
 A - HCl  
 B - NaOH  
 C - Zn Acetate  
 D - Nitric Acid  
 E - Nitric Acid  
 F - MeOH  
 G - Ammonia  
 H - Ascorbic Acid  
 I - Ice  
 J - Di Water  
 K - EDTA  
 L - EDA  
 Other:  
 M - Hexane  
 N - None  
 O - AsHClO2  
 P - Na2O4S  
 Q - Na2SO3  
 R - Na2SO4  
 S - H2SO4  
 T - TSP Dodecahydrate  
 U - Acetone  
 V - MCAA  
 W - Ph 4.5  
 Z - other (specify)

**Sample Disposal** (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months  
 Special Instructions/OC Requirements:  
 Method of Shipment: \_\_\_\_\_  
 Date/Time: \_\_\_\_\_  
 Received by: \_\_\_\_\_ Company: \_\_\_\_\_  
 Date/Time: 1/20/17 1445 Company: ERM  
 Date/Time: 1/19/2017 1645 Company: ERM  
 Date/Time: 1/19/2017 1645 Company: ERM  
 Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Cooler Temperature(s) °C and Other Remarks: 1.30 C JR 17

**Chain of Custody Record**

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

**Client Information**

Client Contact:  
Joju Abraham

Lab POC:  
Whitmore, Cheyenne R.  
E-Mail: cheyenne.whitmore@testamericainc.com

**Company:**

Southern Company  
Address:  
241 Ralph McGill Blvd SE B10185  
City:  
Atlanta  
State, Zip:  
GA, 30308  
Phone:  
404-506-7239  
Email:  
JAbraham@southernco.com  
Project Name:  
Plant Wansley - Ash Pond  
Site:  
CCR

Due Date Requested:  
TAT Requested (days):

PO #:

WOC #:

Project #:

ISSOW #:

Carrier Tracking No(s):

COC No:

Page:

Job #:

**Analysis Requested**

Preservation Codes:  
M - Hexane  
N - None  
O - AsHClO2  
P - Na2SO4  
Q - Na2SO3  
R - H2SO4  
S - H2SO4  
T - TSP Dodecahydrate  
U - Acetone  
V - MCAA  
W - pH 4-5  
X - EDTA  
Y - EDA  
Z - other (specify)

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:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, G=grab)	Total Number of containers	Special Instructions/Note:
WGWC-17	1/20/17	1035	G	W	2	extra Radium bottle

Possible Hazard Identification  
 Non-Hazard  
 Flammable  
 Skin Irritant  
 Poison B  
 Unknown  
 Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  
 Disposal By Lab  
 Archive For \_\_\_\_\_ Months

Special Instructions/QC Requirements:

Method of Shipment:

Time:

Date/Time:

Date/Time:

Date/Time:

Relinquished by:

Relinquished by:

Relinquished by:

Relinquished by:

Custody Seals Intact:  Yes  No

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Received by:

Received by:

Received by:

Received by:

Received by:

Received by:

Received by:

Date/Time:

Date/Time:

Date/Time:

Date/Time:

Date/Time:

Company

Company

Company

Company

Company

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Company



601-A111111



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132828-1

SDG Number: Ash Pond

**Login Number: 132828**

**List Number: 1**

**Creator: Siddoway, Benjamin**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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	0.2°C, 2.6°C IR-2
Cooler Temperature is recorded.	True	0.0°C IR-7, 3.7°C IR-6, 1.3°C IR-7, 1.3°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	



# Certification Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-1  
SDG: Ash Pond

## 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

# 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: 400-132828-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Plant Wansley

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

2/24/2017 10:22:41 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

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

### LINKS

Review your project  
results through

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Have a Question?



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

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

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

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

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# Case Narrative

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

**Job ID: 400-132828-2**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-132828-2

#### RAD

Method(s) PrecSep\_0: Radium-228 Prep Batch 160-289146: Insufficient sample volume was available to perform a sample duplicate (DU). An LCS/LCSD was prepared to demonstrate batch precision; WGWA-2 (400-132828-1), WGWA-1 (400-132828-2), DUP-1 (400-132828-3), WGWA-6 (400-132828-4), WGWA-4 (400-132828-5), WGWA-3 (400-132828-6), WGWA-7 (400-132828-7), WGWA-5 (400-132828-8), WGWA-18 (400-132828-9), FERB-1 (400-132828-10), FB-1 (400-132828-11) and WGWC-17 (400-132828-12).

Method(s) PrecSep-21: Radium-226 Prep Batch 160-289139: Insufficient sample volume was available to perform a sample duplicate (DU). An LCS/LCSD was prepared to demonstrate batch precision; WGWA-2 (400-132828-1), WGWA-1 (400-132828-2), DUP-1 (400-132828-3), WGWA-6 (400-132828-4), WGWA-4 (400-132828-5), WGWA-3 (400-132828-6), WGWA-7 (400-132828-7), WGWA-5 (400-132828-8), WGWA-18 (400-132828-9), FERB-1 (400-132828-10), FB-1 (400-132828-11) and WGWC-17 (400-132828-12).



# Method Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

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 Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132828-1	WGWA-2	Water	01/17/17 11:35	01/19/17 08:48
400-132828-2	WGWA-1	Water	01/17/17 13:35	01/19/17 08:48
400-132828-3	DUP-1	Water	01/17/17 00:00	01/19/17 08:48
400-132828-4	WGWA-6	Water	01/18/17 12:30	01/20/17 09:08
400-132828-5	WGWA-4	Water	01/18/17 13:50	01/20/17 09:08
400-132828-6	WGWA-3	Water	01/18/17 15:15	01/20/17 09:08
400-132828-7	WGWA-7	Water	01/18/17 17:10	01/20/17 09:08
400-132828-8	WGWA-5	Water	01/19/17 10:05	01/21/17 09:07
400-132828-9	WGWA-18	Water	01/19/17 13:20	01/21/17 09:07
400-132828-10	FERB-1	Water	01/19/17 12:00	01/21/17 09:07
400-132828-11	FB-1	Water	01/19/17 13:55	01/21/17 09:07
400-132828-12	WGWC-17	Water	01/20/17 10:35	01/21/17 09:07

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

**Client Sample ID: WGWA-2**

**Lab Sample ID: 400-132828-1**

**Date Collected: 01/17/17 11:35**

**Matrix: Water**

**Date Received: 01/19/17 08:48**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0956	U	0.117	0.118	1.00	0.193	pCi/L	01/25/17 10:10	02/18/17 11:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	72.6		40 - 110					01/25/17 10:10	02/18/17 11:58	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.499	U	0.371	0.374	1.00	0.584	pCi/L	01/25/17 11:02	02/14/17 13:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	72.6		40 - 110					01/25/17 11:02	02/14/17 13:02	1
Y Carrier	77.0		40 - 110					01/25/17 11:02	02/14/17 13:02	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Combined Radium 226 + 228</b>	<b>0.595</b>		0.389	0.392	5.00	0.584	pCi/L		02/21/17 11:34	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

**Client Sample ID: WGWA-1**

**Lab Sample ID: 400-132828-2**

**Date Collected: 01/17/17 13:35**

**Matrix: Water**

**Date Received: 01/19/17 08:48**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0777	U	0.0966	0.0969	1.00	0.159	pCi/L	01/25/17 10:10	02/18/17 11:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	70.9		40 - 110					01/25/17 10:10	02/18/17 11:58	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.217	U	0.300	0.301	1.00	0.501	pCi/L	01/25/17 11:02	02/14/17 13:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	70.9		40 - 110					01/25/17 11:02	02/14/17 13:02	1
Y Carrier	90.8		40 - 110					01/25/17 11:02	02/14/17 13:02	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.295	U	0.315	0.316	5.00	0.501	pCi/L		02/21/17 11:34	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

**Client Sample ID: DUP-1**

**Date Collected: 01/17/17 00:00**

**Date Received: 01/19/17 08:48**

**Lab Sample ID: 400-132828-3**

**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	0.137	U	0.115	0.116	1.00	0.169	pCi/L	01/25/17 10:10	02/18/17 11:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	70.9		40 - 110					01/25/17 10:10	02/18/17 11:58	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.320	U	0.311	0.312	1.00	0.504	pCi/L	01/25/17 11:02	02/14/17 13:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	70.9		40 - 110					01/25/17 11:02	02/14/17 13:02	1
Y Carrier	86.7		40 - 110					01/25/17 11:02	02/14/17 13:02	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.457	U	0.332	0.333	5.00	0.504	pCi/L		02/21/17 11:34	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-132828-4**

Date Collected: 01/18/17 12:30

Matrix: Water

Date Received: 01/20/17 09:08

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.81		0.454	0.569	1.00	0.181	pCi/L	01/25/17 10:10	02/20/17 13:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	61.5		40 - 110					01/25/17 10:10	02/20/17 13:15	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	6.60		0.772	0.982	1.00	0.674	pCi/L	01/25/17 11:02	02/14/17 13:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	61.5		40 - 110					01/25/17 11:02	02/14/17 13:02	1
Y Carrier	82.6		40 - 110					01/25/17 11:02	02/14/17 13:02	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	10.4		0.896	1.14	5.00	0.674	pCi/L		02/21/17 11:34	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-132828-5**

Date Collected: 01/18/17 13:50

Matrix: Water

Date Received: 01/20/17 09:08

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.727		0.197	0.207	1.00	0.160	pCi/L	01/25/17 10:10	02/18/17 11:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.6		40 - 110					01/25/17 10:10	02/18/17 11:58	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.04		0.339	0.352	1.00	0.444	pCi/L	01/25/17 11:02	02/14/17 13:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.6		40 - 110					01/25/17 11:02	02/14/17 13:02	1
Y Carrier	83.7		40 - 110					01/25/17 11:02	02/14/17 13:02	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.76		0.392	0.409	5.00	0.444	pCi/L		02/21/17 11:34	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

**Client Sample ID: WGWA-3**

**Lab Sample ID: 400-132828-6**

**Date Collected: 01/18/17 15:15**

**Matrix: Water**

**Date Received: 01/20/17 09:08**

### 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	U	0.125	0.126	1.00	0.191	pCi/L	01/25/17 10:10	02/18/17 11:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	71.8		40 - 110					01/25/17 10:10	02/18/17 11:58	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.291	U	0.306	0.307	1.00	0.499	pCi/L	01/25/17 11:02	02/14/17 13:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	71.8		40 - 110					01/25/17 11:02	02/14/17 13:02	1
Y Carrier	88.2		40 - 110					01/25/17 11:02	02/14/17 13:02	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.434	U	0.331	0.332	5.00	0.499	pCi/L		02/21/17 11:34	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

**Client Sample ID: WGWA-7**

**Date Collected: 01/18/17 17:10**

**Date Received: 01/20/17 09:08**

**Lab Sample ID: 400-132828-7**

**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	0.131	U	0.144	0.144	1.00	0.230	pCi/L	01/25/17 10:10	02/18/17 12:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	56.7		40 - 110					01/25/17 10:10	02/18/17 12:30	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0818	U	0.374	0.374	1.00	0.656	pCi/L	01/25/17 11:02	02/14/17 13:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	56.7		40 - 110					01/25/17 11:02	02/14/17 13:02	1
Y Carrier	86.4		40 - 110					01/25/17 11:02	02/14/17 13:02	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.213	U	0.401	0.401	5.00	0.656	pCi/L		02/21/17 11:34	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

**Client Sample ID: WGWA-5**

**Lab Sample ID: 400-132828-8**

**Date Collected: 01/19/17 10:05**

**Matrix: Water**

**Date Received: 01/21/17 09:07**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.116	U	0.111	0.112	1.00	0.173	pCi/L	01/25/17 10:10	02/18/17 11:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.2		40 - 110					01/25/17 10:10	02/18/17 11:57	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.101	U	0.257	0.257	1.00	0.445	pCi/L	01/25/17 11:02	02/14/17 13:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.2		40 - 110					01/25/17 11:02	02/14/17 13:02	1
Y Carrier	83.7		40 - 110					01/25/17 11:02	02/14/17 13:02	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.216	U	0.280	0.280	5.00	0.445	pCi/L		02/21/17 11:34	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

**Client Sample ID: WGWA-18**

**Date Collected: 01/19/17 13:20**

**Date Received: 01/21/17 09:07**

**Lab Sample ID: 400-132828-9**

**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	0.0978	U	0.106	0.106	1.00	0.167	pCi/L	01/25/17 10:10	02/18/17 11:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	66.7		40 - 110					01/25/17 10:10	02/18/17 11:57	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0233	U	0.264	0.264	1.00	0.482	pCi/L	01/25/17 11:02	02/14/17 13:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	66.7		40 - 110					01/25/17 11:02	02/14/17 13:02	1
Y Carrier	89.7		40 - 110					01/25/17 11:02	02/14/17 13:02	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0745	U	0.284	0.284	5.00	0.482	pCi/L		02/21/17 11:34	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

**Client Sample ID: FERB-1**

**Lab Sample ID: 400-132828-10**

**Date Collected: 01/19/17 12:00**

**Matrix: Water**

**Date Received: 01/21/17 09:07**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0307	U	0.0796	0.0796	1.00	0.148	pCi/L	01/25/17 10:10	02/18/17 11:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					01/25/17 10:10	02/18/17 11:57	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0686	U	0.221	0.221	1.00	0.412	pCi/L	01/25/17 11:02	02/14/17 13:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					01/25/17 11:02	02/14/17 13:02	1
Y Carrier	83.7		40 - 110					01/25/17 11:02	02/14/17 13:02	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0379	U	0.235	0.235	5.00	0.412	pCi/L		02/21/17 11:34	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

**Client Sample ID: FB-1**

**Date Collected: 01/19/17 13:55**

**Date Received: 01/21/17 09:07**

**Lab Sample ID: 400-132828-11**

**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	0.0158	U	0.0761	0.0761	1.00	0.153	pCi/L	01/25/17 10:10	02/18/17 11:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.6		40 - 110					01/25/17 10:10	02/18/17 11:57	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0995	U	0.288	0.289	1.00	0.501	pCi/L	01/25/17 11:02	02/14/17 13:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.6		40 - 110					01/25/17 11:02	02/14/17 13:02	1
Y Carrier	83.0		40 - 110					01/25/17 11:02	02/14/17 13:02	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.115	U	0.298	0.299	5.00	0.501	pCi/L		02/21/17 11:34	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-132828-12**

Date Collected: 01/20/17 10:35

Matrix: Water

Date Received: 01/21/17 09:07

### 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	U	0.151	0.151	1.00	0.238	pCi/L	01/25/17 10:10	02/18/17 12:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	46.7		40 - 110					01/25/17 10:10	02/18/17 12:30	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.21		0.567	0.578	1.00	0.828	pCi/L	01/25/17 11:02	02/14/17 13:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	46.7		40 - 110					01/25/17 11:02	02/14/17 13:03	1
Y Carrier	83.7		40 - 110					01/25/17 11:02	02/14/17 13:03	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.35		0.587	0.597	5.00	0.828	pCi/L		02/21/17 11:34	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

## 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 Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

**Client Sample ID: WGWA-2**

**Date Collected: 01/17/17 11:35**

**Date Received: 01/19/17 08:48**

**Lab Sample ID: 400-132828-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289139	01/25/17 10:10	MBC	TAL SL
Total/NA	Analysis	9315		1	293143	02/18/17 11:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289146	01/25/17 11:02	MBC	TAL SL
Total/NA	Analysis	9320		1	292220	02/14/17 13:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	RTM	TAL SL

**Client Sample ID: WGWA-1**

**Date Collected: 01/17/17 13:35**

**Date Received: 01/19/17 08:48**

**Lab Sample ID: 400-132828-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289139	01/25/17 10:10	MBC	TAL SL
Total/NA	Analysis	9315		1	293143	02/18/17 11:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289146	01/25/17 11:02	MBC	TAL SL
Total/NA	Analysis	9320		1	292220	02/14/17 13:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	RTM	TAL SL

**Client Sample ID: DUP-1**

**Date Collected: 01/17/17 00:00**

**Date Received: 01/19/17 08:48**

**Lab Sample ID: 400-132828-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289139	01/25/17 10:10	MBC	TAL SL
Total/NA	Analysis	9315		1	293143	02/18/17 11:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289146	01/25/17 11:02	MBC	TAL SL
Total/NA	Analysis	9320		1	292220	02/14/17 13:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	RTM	TAL SL

**Client Sample ID: WGWA-6**

**Date Collected: 01/18/17 12:30**

**Date Received: 01/20/17 09:08**

**Lab Sample ID: 400-132828-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289139	01/25/17 10:10	MBC	TAL SL
Total/NA	Analysis	9315		1	293435	02/20/17 13:15	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289146	01/25/17 11:02	MBC	TAL SL
Total/NA	Analysis	9320		1	292220	02/14/17 13:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-132828-5**

**Date Collected: 01/18/17 13:50**

**Matrix: Water**

**Date Received: 01/20/17 09:08**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289139	01/25/17 10:10	MBC	TAL SL
Total/NA	Analysis	9315		1	293143	02/18/17 11:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289146	01/25/17 11:02	MBC	TAL SL
Total/NA	Analysis	9320		1	292220	02/14/17 13:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	RTM	TAL SL

**Client Sample ID: WGWA-3**

**Lab Sample ID: 400-132828-6**

**Date Collected: 01/18/17 15:15**

**Matrix: Water**

**Date Received: 01/20/17 09:08**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289139	01/25/17 10:10	MBC	TAL SL
Total/NA	Analysis	9315		1	293143	02/18/17 11:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289146	01/25/17 11:02	MBC	TAL SL
Total/NA	Analysis	9320		1	292220	02/14/17 13:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	RTM	TAL SL

**Client Sample ID: WGWA-7**

**Lab Sample ID: 400-132828-7**

**Date Collected: 01/18/17 17:10**

**Matrix: Water**

**Date Received: 01/20/17 09:08**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289139	01/25/17 10:10	MBC	TAL SL
Total/NA	Analysis	9315		1	293146	02/18/17 12:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289146	01/25/17 11:02	MBC	TAL SL
Total/NA	Analysis	9320		1	292220	02/14/17 13:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	RTM	TAL SL

**Client Sample ID: WGWA-5**

**Lab Sample ID: 400-132828-8**

**Date Collected: 01/19/17 10:05**

**Matrix: Water**

**Date Received: 01/21/17 09:07**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289139	01/25/17 10:10	MBC	TAL SL
Total/NA	Analysis	9315		1	293143	02/18/17 11:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289146	01/25/17 11:02	MBC	TAL SL
Total/NA	Analysis	9320		1	292220	02/14/17 13:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

**Client Sample ID: WGWA-18**

**Lab Sample ID: 400-132828-9**

**Date Collected: 01/19/17 13:20**

**Matrix: Water**

**Date Received: 01/21/17 09:07**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289139	01/25/17 10:10	MBC	TAL SL
Total/NA	Analysis	9315		1	293143	02/18/17 11:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289146	01/25/17 11:02	MBC	TAL SL
Total/NA	Analysis	9320		1	292220	02/14/17 13:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	RTM	TAL SL

**Client Sample ID: FERB-1**

**Lab Sample ID: 400-132828-10**

**Date Collected: 01/19/17 12:00**

**Matrix: Water**

**Date Received: 01/21/17 09:07**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289139	01/25/17 10:10	MBC	TAL SL
Total/NA	Analysis	9315		1	293143	02/18/17 11:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289146	01/25/17 11:02	MBC	TAL SL
Total/NA	Analysis	9320		1	292220	02/14/17 13:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	RTM	TAL SL

**Client Sample ID: FB-1**

**Lab Sample ID: 400-132828-11**

**Date Collected: 01/19/17 13:55**

**Matrix: Water**

**Date Received: 01/21/17 09:07**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289139	01/25/17 10:10	MBC	TAL SL
Total/NA	Analysis	9315		1	293143	02/18/17 11:57	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289146	01/25/17 11:02	MBC	TAL SL
Total/NA	Analysis	9320		1	292220	02/14/17 13:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	RTM	TAL SL

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-132828-12**

**Date Collected: 01/20/17 10:35**

**Matrix: Water**

**Date Received: 01/21/17 09:07**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289139	01/25/17 10:10	MBC	TAL SL
Total/NA	Analysis	9315		1	293146	02/18/17 12:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289146	01/25/17 11:02	MBC	TAL SL
Total/NA	Analysis	9320		1	292221	02/14/17 13:03	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293688	02/21/17 11:34	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 Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

## Rad

### Prep Batch: 289139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-1	WGWA-2	Total/NA	Water	PrecSep-21	
400-132828-2	WGWA-1	Total/NA	Water	PrecSep-21	
400-132828-3	DUP-1	Total/NA	Water	PrecSep-21	
400-132828-4	WGWA-6	Total/NA	Water	PrecSep-21	
400-132828-5	WGWA-4	Total/NA	Water	PrecSep-21	
400-132828-6	WGWA-3	Total/NA	Water	PrecSep-21	
400-132828-7	WGWA-7	Total/NA	Water	PrecSep-21	
400-132828-8	WGWA-5	Total/NA	Water	PrecSep-21	
400-132828-9	WGWA-18	Total/NA	Water	PrecSep-21	
400-132828-10	FERB-1	Total/NA	Water	PrecSep-21	
400-132828-11	FB-1	Total/NA	Water	PrecSep-21	
400-132828-12	WGWC-17	Total/NA	Water	PrecSep-21	
MB 160-289139/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-289139/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-289139/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 289146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-1	WGWA-2	Total/NA	Water	PrecSep_0	
400-132828-2	WGWA-1	Total/NA	Water	PrecSep_0	
400-132828-3	DUP-1	Total/NA	Water	PrecSep_0	
400-132828-4	WGWA-6	Total/NA	Water	PrecSep_0	
400-132828-5	WGWA-4	Total/NA	Water	PrecSep_0	
400-132828-6	WGWA-3	Total/NA	Water	PrecSep_0	
400-132828-7	WGWA-7	Total/NA	Water	PrecSep_0	
400-132828-8	WGWA-5	Total/NA	Water	PrecSep_0	
400-132828-9	WGWA-18	Total/NA	Water	PrecSep_0	
400-132828-10	FERB-1	Total/NA	Water	PrecSep_0	
400-132828-11	FB-1	Total/NA	Water	PrecSep_0	
400-132828-12	WGWC-17	Total/NA	Water	PrecSep_0	
MB 160-289146/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-289146/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-289146/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	



# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

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

**Lab Sample ID: MB 160-289139/1-A**  
**Matrix: Water**  
**Analysis Batch: 293146**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 289139**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.01159	U	0.0850	0.0850	1.00	0.173	pCi/L	01/25/17 10:10	02/18/17 10:51	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.2		40 - 110					01/25/17 10:10	02/18/17 10:51	1

**Lab Sample ID: LCS 160-289139/2-A**  
**Matrix: Water**  
**Analysis Batch: 293146**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 289139**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	6.01	8.034		0.963	1.00	0.217	pCi/L	134	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	75.8		40 - 110						

**Lab Sample ID: LCSD 160-289139/3-A**  
**Matrix: Water**  
**Analysis Batch: 293387**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 289139**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	6.01	7.959		0.929	1.00	0.141	pCi/L	132	68 - 137	0.04	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	67.0		40 - 110								

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

**Lab Sample ID: MB 160-289146/1-A**  
**Matrix: Water**  
**Analysis Batch: 292221**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 289146**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1547	U	0.311	0.311	1.00	0.528	pCi/L	01/25/17 11:02	02/14/17 13:16	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.2		40 - 110					01/25/17 11:02	02/14/17 13:16	1
Y Carrier	89.0		40 - 110					01/25/17 11:02	02/14/17 13:16	1

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

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

**Lab Sample ID: LCS 160-289146/2-A**  
**Matrix: Water**  
**Analysis Batch: 292221**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 289146**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.8	16.66		1.84	1.00	0.449	pCi/L	120	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	75.8		40 - 110
Y Carrier	81.5		40 - 110

**Lab Sample ID: LCSD 160-289146/3-A**  
**Matrix: Water**  
**Analysis Batch: 292220**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 289146**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	13.8	16.58		1.85	1.00	0.498	pCi/L	120	56 - 140	0.02	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	67.0		40 - 110
Y Carrier	85.2		40 - 110

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

**Lab Sample ID: 400-132918-A-9 DU**  
**Matrix: Water**  
**Analysis Batch: 293688**

**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	0.796		0.9113		0.294	5.00	0.364	pCi/L	0.19	



**Chain of Custody Record**

TestAmerica Pensacola  
3855 McLemore Drive  
Pensacola, FL 32514  
Phone (850) 474-1001 Fax (850) 478-2671

**Client Information**

Client Contact:  
Joju Abraham

Sample: A. Shorebirds Ash, Thomas Mt  
Phone:

Lab POC: Whitmore, Cheryenne R.  
Email: cheryenne.whitmore@testamerica.com

Center Tracking No(s):

COC No:

Page:

**Company:**

Southern Company

Address: 241 Reich McGill Blvd SE B10185

City: Atlanta

State, Zip: GA, 30308

Phone: 404-506-7239

Email: JAbraham@southernco.com

Project Name: Plant Wensley - Ash Pond

Site: CCR

Due Date Requested:

TAT Requested (days):

PO #:

WO #:

Project #:

SSON#:

**Analysis Requested**

TPS - SM 2840C ; Cl, F, SO4 - EPA 300  
Metals - Part 257 Appendix III & IV EPA 8020 & EPA 7470  
Radium 226 & 228 - SM 446 9816 & 9920

**Preservation Codes:**

- A - HCl
- B - NaOH
- C - Zn Acetate
- D - Nitric Acid
- E - Nitric Acid
- F - MeOH
- G - Ammonia
- H - Ascorbic Acid
- I - Ice
- J - DI Water
- K - EDTA
- L - EDA
- Other:

**Preservation Codes:**

- M - Horene
- N - None
- O - ASHCO2
- P - N2O4AS
- Q - N2S2O8S
- R - N2S2O8S
- S - H2SO4
- T - TSP Dodecahydrate
- U - Acetone
- V - MCAA
- W - pH 4.5
- Z - other (specify)

**Special Instructions/Note:**

400-132828 COC

**Sample Identification**

Sample ID	Sample Date	Sample Time (G-grab)	Sample Type (C-comp, G-grab)	Matrix (W-water, S-solid, O-organic, I-inorganic)
WGWA-6	1/18/17	1230	G	W
WGWA-4	1/18/17	1350	G	W
WGWA-3	1/18/17	1515	G	W
WGWA-7	1/18/17	1710	G	W

**Possible Hazard Identification**

Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological

**Deliverable Requested**

Return To Client  Archive For \_\_\_\_\_ Months

**Empty Kit Relinquished by:**

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_

**Relinquished by:**

Relinquished by: \_\_\_\_\_ Date: 1/18/17 1355 Company: \_\_\_\_\_

**Relinquished by:**

Relinquished by: \_\_\_\_\_ Date: 1/19/17 1630 Company: \_\_\_\_\_

**Relinquished by:**

Relinquished by: \_\_\_\_\_ Date: 1/20/17 908 Company: TA

**Customary Seals Intact**

Customary Seal No.: \_\_\_\_\_ Cooler Temperature (°C) and Other Remarks: 0.0°C IRT



**Chain of Custody Record**

**TestAmerica Pensacola**  
3335 McLemore Drive  
Pensacola, FL 32514  
Phone (850) 474-1001 Fax (850) 478-2871

**Client Information**  
 Client Contact: Whitnira, Cheyenne R  
 Phone: cheyenne.whitnira@testamerica.com  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

**Analysis Requested**  
 Due Date Requested: \_\_\_\_\_  
 TAT Requested (days): \_\_\_\_\_  
 PO #: \_\_\_\_\_  
 WO #: \_\_\_\_\_  
 Project #: \_\_\_\_\_  
 SSOW#: \_\_\_\_\_

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=sediment, O=soil, G=grass, A=air)	Preservation Codes		Special Instructions/Note:
					A-HCl	M-Hexane	
WGWA-5	1/19/17	1005	G	W	X		
WGWA-18	1/19/17	1320	G	W	X		
FERB-1	1/18/17	1200	G	W	X		
FB-1	1/19/17	1355	G	W	X		

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Unknown  Radiological  Poison B  
 Deliverable Requested:  I,  II,  III,  IV, Other (specify) \_\_\_\_\_  
 Empty Kit Relinquished by: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_  
 Custody Seal No.: \_\_\_\_\_  
 A Yes A No

**Chain of Custody**  
 Received by: \_\_\_\_\_ Date: 01/20/2017 Time: 1645  
 Relinquished by: \_\_\_\_\_ Date: 1/19/2017 Time: 1645  
 Relinquished by: \_\_\_\_\_ Date: 1/20/2017 Time: 1445  
 Relinquished by: \_\_\_\_\_ Date: 1/21/2017 Time: 1445  
 Cooler Temperature(s) °C and Other Remarks: 1.30 C JR 17

**Chain of Custody Record**

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

**Client Information**  
Client Contact: Joju Abraham  
Company: Southern Company  
Address: 241 Ralph McGill Blvd SE B10185  
City: Atlanta  
State: GA, Zip: 30308  
Phone: 404-506-7239  
Email: JAbraham@southern.com  
Project Name: Plant Wansley - Ash Pond  
Site: CCR

Sampler: A. Shorelids & Phone:  
Lab P.M.: Whitmore, Cheyenne R.  
E-Mail: cheyenne.whitmore@testamericainc.com

Carrier Tracking No(s):

COC No:

Page:

Job #:

031-AT-1111

**Analysis Requested**

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Inorganic, Specific, Organics)	Field/Method	Analysis Requested	Special Instructions/Note:
WGW-17	1/20/17	1035	G	W	X	TDS - SM 2540C; Cl, F, SO4 - EPA 300 Metals - Part 287 Appendix III & IV EPA 620 & EPA 7470 Radium 226 & 228 - SW-846 9316 & 9320	Preservation Codes: M - Hexane N - None O - AsHClO2 P - Na2SO4 Q - Na2SO3 R - H2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Y - Other (specify) Z - Other (specify)
							extra Radium bottle

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)

**Sample Disposal** (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months  
 Special Instructions/QC Requirements:

Empty kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Method of Shipment: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: 01/20/2017 14:15 Company: ERM  
 Relinquished by: \_\_\_\_\_ Date/Time: 1/30/2017 16:45 Company: ERM  
 Relinquished by: \_\_\_\_\_ Date/Time: 1/20/17 09:07 Company: ERM  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Custody Seals Intact: \_\_\_\_\_ Custody Seal No.: \_\_\_\_\_  
 Δ Yes Δ No  
 Cooler Temperature(s) °C and Other Remarks:



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132828-2

SDG Number: Ash Pond

**Login Number: 132828**

**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.	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	0.2°C, 2.6°C IR-2
Cooler Temperature is recorded.	True	0.0°C IR-7, 3.7°C IR-6, 1.3°C IR-7, 1.3°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 Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

## Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP Secondary AB	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

## Laboratory: TestAmerica St. Louis

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-17
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-17 *
Florida	NELAP	4	E87689	06-30-17
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17
Nevada	State Program	9	MO000542017-1	07-31-17
New Jersey	NELAP	2	MO002	06-30-17
New York	NELAP	2	11616	03-31-17 *

\* Certification renewal pending - certification considered valid.



# Certification Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-2  
SDG: Ash Pond

## Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
North Dakota	State Program	8	R207	06-30-17
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-17 *
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: 400-132828-3

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Plant Wansley

For:

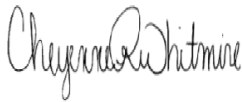
Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

2/24/2017 10:22:10 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

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

### LINKS

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results through

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

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

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

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

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# Case Narrative

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

**Job ID: 400-132828-3**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-132828-3

#### HPLC/IC

Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: WGWC-16 (400-132828-14). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The continuing calibration blank (CCB) for analytical batch 340584 contained Chloride above the reporting limit (RL). All reported samples associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: WGWC-16 (400-132828-14). Elevated reporting limits (RLs) are provided.

#### Metals

Method(s) 6020: The following sample was diluted to bring the concentration of target analytes within the calibration range: WGWC-16 (400-132828-14). Elevated reporting limits (RLs) are provided.



# Detection Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

## Client Sample ID: WGWC-15

## Lab Sample ID: 400-132828-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.1		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.92		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	34		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0019		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.017		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	28		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0075		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0049	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	140		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-16

## Lab Sample ID: 400-132828-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	310		10	8.9	mg/L	10		300.0	Total/NA
Fluoride	0.15	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	600		50	35	mg/L	50		300.0	Total/NA
Arsenic	0.0015		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.068		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00055	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cobalt	0.015		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.011		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.012		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00023	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	6.3		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	280		1.3	0.63	mg/L	25		6020	Total Recoverable
Mercury	0.000070	J	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	1300		10	6.8	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-14

## Lab Sample ID: 400-132828-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.0		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	10		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.21		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.21		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	6.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Lead	0.00040	J	0.0013	0.00035	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 Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

## Client Sample ID: WGWC-14 (Continued)

## Lab Sample ID: 400-132828-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	68		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-12

## Lab Sample ID: 400-132828-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.1		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	15		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.023		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.047	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	16		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0022	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0074		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

## Client Sample ID: WGWC-13

## Lab Sample ID: 400-132828-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.28		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	6.8		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00066	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.042		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.033	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	6.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Molybdenum	0.0023	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	80		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-11

## Lab Sample ID: 400-132828-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.4		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	2.5		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00047	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.042		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.021	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	3.5		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	18		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 Wansley

TestAmerica Job ID: 400-132828-3  
 SDG: Ash Pond

**Client Sample ID: DUP-2**

**Lab Sample ID: 400-132828-19**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.1		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	10		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00053	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.21		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.15		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	6.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Lead	0.00043	J	0.0013	0.00035	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	76		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola



# Method Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN

#### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132828-13	WGWC-15	Water	01/24/17 12:10	01/27/17 09:07
400-132828-14	WGWC-16	Water	01/24/17 13:20	01/27/17 09:07
400-132828-15	WGWC-14	Water	01/27/17 09:40	01/28/17 08:49
400-132828-16	WGWC-12	Water	01/27/17 10:10	01/28/17 08:49
400-132828-17	WGWC-13	Water	01/27/17 11:15	01/28/17 08:49
400-132828-18	WGWC-11	Water	01/27/17 11:55	01/28/17 08:49
400-132828-19	DUP-2	Water	01/27/17 00:00	01/28/17 08:49

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-132828-13**

**Date Collected: 01/24/17 12:10**

**Matrix: Water**

**Date Received: 01/27/17 09:07**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.1		1.0	0.89	mg/L			02/06/17 18:25	1
Fluoride	0.92		0.20	0.082	mg/L			02/01/17 14:31	1
Sulfate	34		1.0	0.70	mg/L			02/01/17 14:31	1

### 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		01/30/17 09:15	01/31/17 14:29	5
Arsenic	0.0019		0.0013	0.00046	mg/L		01/30/17 09:15	01/31/17 14:29	5
Barium	0.017		0.0025	0.00049	mg/L		01/30/17 09:15	01/31/17 14:29	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/30/17 09:15	01/31/17 14:29	5
Boron	<0.021		0.050	0.021	mg/L		01/30/17 09:15	01/31/17 14:29	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/30/17 09:15	01/31/17 14:29	5
Calcium	28		0.25	0.13	mg/L		01/30/17 09:15	01/31/17 14:29	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/30/17 09:15	01/31/17 14:29	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/30/17 09:15	01/31/17 14:29	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/30/17 09:15	01/31/17 14:29	5
Lithium	0.0075		0.0050	0.0032	mg/L		01/30/17 09:15	01/31/17 14:29	5
Molybdenum	0.0049 J		0.015	0.00085	mg/L		01/30/17 09:15	01/31/17 14:29	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/30/17 09:15	01/31/17 14:29	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/30/17 09:15	01/31/17 14:29	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		01/30/17 10:32	01/31/17 13:45	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	140		5.0	3.4	mg/L			01/28/17 14:45	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-132828-14**

Date Collected: 01/24/17 13:20

Matrix: Water

Date Received: 01/27/17 09:07

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	310		10	8.9	mg/L			02/02/17 17:54	10
Fluoride	0.15	J	0.20	0.082	mg/L			02/01/17 15:39	1
Sulfate	600		50	35	mg/L			02/03/17 12:18	50

### 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		01/30/17 09:15	01/31/17 14:33	5
Arsenic	0.0015		0.0013	0.00046	mg/L		01/30/17 09:15	01/31/17 14:33	5
Barium	0.068		0.0025	0.00049	mg/L		01/30/17 09:15	01/31/17 14:33	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/30/17 09:15	01/31/17 14:33	5
Cadmium	0.00055	J	0.0025	0.00034	mg/L		01/30/17 09:15	01/31/17 14:33	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/30/17 09:15	01/31/17 14:33	5
Cobalt	0.015		0.0025	0.00040	mg/L		01/30/17 09:15	01/31/17 14:33	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/30/17 09:15	01/31/17 14:33	5
Lithium	0.011		0.0050	0.0032	mg/L		01/30/17 09:15	01/31/17 14:33	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/30/17 09:15	01/31/17 14:33	5
Selenium	0.012		0.0013	0.00024	mg/L		01/30/17 09:15	01/31/17 14:33	5
Thallium	0.00023	J	0.00050	0.000085	mg/L		01/30/17 09:15	01/31/17 14:33	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.3		0.25	0.11	mg/L		01/30/17 09:15	01/31/17 15:05	25
Calcium	280		1.3	0.63	mg/L		01/30/17 09:15	01/31/17 15:05	25

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	J	0.00020	0.000070	mg/L		01/30/17 10:32	01/31/17 14:00	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1300		10	6.8	mg/L			01/28/17 14:45	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

**Client Sample ID: WGWC-14**

**Lab Sample ID: 400-132828-15**

**Date Collected: 01/27/17 09:40**

**Matrix: Water**

**Date Received: 01/28/17 08:49**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>8.0</b>		1.0	0.89	mg/L			01/31/17 08:08	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/17 08:08	1
<b>Sulfate</b>	<b>10</b>		1.0	0.70	mg/L			01/31/17 08:08	1

### 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		01/30/17 09:15	01/31/17 14:38	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/30/17 09:15	01/31/17 14:38	5
<b>Barium</b>	<b>0.21</b>		0.0025	0.00049	mg/L		01/30/17 09:15	01/31/17 14:38	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/30/17 09:15	01/31/17 14:38	5
<b>Boron</b>	<b>0.21</b>		0.050	0.021	mg/L		01/30/17 09:15	01/31/17 14:38	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/30/17 09:15	01/31/17 14:38	5
<b>Calcium</b>	<b>6.8</b>		0.25	0.13	mg/L		01/30/17 09:15	01/31/17 14:38	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/30/17 09:15	01/31/17 14:38	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/30/17 09:15	01/31/17 14:38	5
<b>Lead</b>	<b>0.00040</b>	<b>J</b>	0.0013	0.00035	mg/L		01/30/17 09:15	01/31/17 14:38	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/30/17 09:15	01/31/17 14:38	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/30/17 09:15	01/31/17 14:38	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/30/17 09:15	01/31/17 14:38	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/30/17 09:15	01/31/17 14:38	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		01/30/17 10:32	01/31/17 14:01	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>68</b>		5.0	3.4	mg/L			01/31/17 14:32	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-132828-16**

**Date Collected: 01/27/17 10:10**

**Matrix: Water**

**Date Received: 01/28/17 08:49**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.1</b>		1.0	0.89	mg/L			01/31/17 08:31	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/17 08:31	1
<b>Sulfate</b>	<b>15</b>		1.0	0.70	mg/L			01/31/17 08:31	1

### 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		01/30/17 09:15	01/31/17 14:42	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/30/17 09:15	01/31/17 14:42	5
<b>Barium</b>	<b>0.023</b>		0.0025	0.00049	mg/L		01/30/17 09:15	01/31/17 14:42	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/30/17 09:15	01/31/17 14:42	5
<b>Boron</b>	<b>0.047</b>	<b>J</b>	0.050	0.021	mg/L		01/30/17 09:15	01/31/17 14:42	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/30/17 09:15	01/31/17 14:42	5
<b>Calcium</b>	<b>16</b>		0.25	0.13	mg/L		01/30/17 09:15	01/31/17 14:42	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/30/17 09:15	01/31/17 14:42	5
<b>Cobalt</b>	<b>0.0022</b>	<b>J</b>	0.0025	0.00040	mg/L		01/30/17 09:15	01/31/17 14:42	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/30/17 09:15	01/31/17 14:42	5
<b>Lithium</b>	<b>0.0074</b>		0.0050	0.0032	mg/L		01/30/17 09:15	01/31/17 14:42	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/30/17 09:15	01/31/17 14:42	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/30/17 09:15	01/31/17 14:42	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/30/17 09:15	01/31/17 14:42	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		01/30/17 10:32	01/31/17 14:03	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>50</b>		5.0	3.4	mg/L			01/31/17 14:32	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-132828-17**

**Date Collected: 01/27/17 11:15**

**Matrix: Water**

**Date Received: 01/28/17 08:49**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4		1.0	0.89	mg/L			01/31/17 09:39	1
Fluoride	0.28		0.20	0.082	mg/L			01/31/17 09:39	1
Sulfate	6.8		1.0	0.70	mg/L			01/31/17 09:39	1

### 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		01/30/17 09:15	01/31/17 14:47	5
Arsenic	0.00066	J	0.0013	0.00046	mg/L		01/30/17 09:15	01/31/17 14:47	5
Barium	0.042		0.0025	0.00049	mg/L		01/30/17 09:15	01/31/17 14:47	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/30/17 09:15	01/31/17 14:47	5
Boron	0.033	J	0.050	0.021	mg/L		01/30/17 09:15	01/31/17 14:47	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/30/17 09:15	01/31/17 14:47	5
Calcium	6.2		0.25	0.13	mg/L		01/30/17 09:15	01/31/17 14:47	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/30/17 09:15	01/31/17 14:47	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/30/17 09:15	01/31/17 14:47	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/30/17 09:15	01/31/17 14:47	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/30/17 09:15	01/31/17 14:47	5
Molybdenum	0.0023	J	0.015	0.00085	mg/L		01/30/17 09:15	01/31/17 14:47	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/30/17 09:15	01/31/17 14:47	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/30/17 09:15	01/31/17 14:47	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		01/30/17 10:32	01/31/17 14:04	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	80		5.0	3.4	mg/L			01/31/17 14:32	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-132828-18**

**Date Collected: 01/27/17 11:55**

**Matrix: Water**

**Date Received: 01/28/17 08:49**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.4</b>		1.0	0.89	mg/L			01/31/17 10:02	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/17 10:02	1
<b>Sulfate</b>	<b>2.5</b>		1.0	0.70	mg/L			01/31/17 10:02	1

### 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		01/30/17 09:15	01/31/17 14:51	5
<b>Arsenic</b>	<b>0.00047</b>	<b>J</b>	0.0013	0.00046	mg/L		01/30/17 09:15	01/31/17 14:51	5
<b>Barium</b>	<b>0.042</b>		0.0025	0.00049	mg/L		01/30/17 09:15	01/31/17 14:51	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/30/17 09:15	01/31/17 14:51	5
<b>Boron</b>	<b>0.021</b>	<b>J</b>	0.050	0.021	mg/L		01/30/17 09:15	01/31/17 14:51	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/30/17 09:15	01/31/17 14:51	5
<b>Calcium</b>	<b>3.5</b>		0.25	0.13	mg/L		01/30/17 09:15	01/31/17 14:51	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/30/17 09:15	01/31/17 14:51	5
<b>Cobalt</b>	<b>0.00049</b>	<b>J</b>	0.0025	0.00040	mg/L		01/30/17 09:15	01/31/17 14:51	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/30/17 09:15	01/31/17 14:51	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/30/17 09:15	01/31/17 14:51	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/30/17 09:15	01/31/17 14:51	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/30/17 09:15	01/31/17 14:51	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/30/17 09:15	01/31/17 14:51	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		01/30/17 10:32	01/31/17 14:05	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>18</b>		5.0	3.4	mg/L			01/31/17 14:32	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

**Client Sample ID: DUP-2**

**Date Collected: 01/27/17 00:00**

**Date Received: 01/28/17 08:49**

**Lab Sample ID: 400-132828-19**

**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>8.1</b>		1.0	0.89	mg/L			01/31/17 10:25	1
Fluoride	<0.082		0.20	0.082	mg/L			01/31/17 10:25	1
<b>Sulfate</b>	<b>10</b>		1.0	0.70	mg/L			01/31/17 10:25	1

**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		01/30/17 09:15	01/31/17 14:56	5
<b>Arsenic</b>	<b>0.00053</b>	<b>J</b>	0.0013	0.00046	mg/L		01/30/17 09:15	01/31/17 14:56	5
<b>Barium</b>	<b>0.21</b>		0.0025	0.00049	mg/L		01/30/17 09:15	01/31/17 14:56	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/30/17 09:15	01/31/17 14:56	5
<b>Boron</b>	<b>0.15</b>		0.050	0.021	mg/L		01/30/17 09:15	01/31/17 14:56	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/30/17 09:15	01/31/17 14:56	5
<b>Calcium</b>	<b>6.7</b>		0.25	0.13	mg/L		01/30/17 09:15	01/31/17 14:56	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/30/17 09:15	01/31/17 14:56	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/30/17 09:15	01/31/17 14:56	5
<b>Lead</b>	<b>0.00043</b>	<b>J</b>	0.0013	0.00035	mg/L		01/30/17 09:15	01/31/17 14:56	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/30/17 09:15	01/31/17 14:56	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/30/17 09:15	01/31/17 14:56	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/30/17 09:15	01/31/17 14:56	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/30/17 09:15	01/31/17 14:56	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		01/30/17 10:32	01/31/17 14:06	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>76</b>		5.0	3.4	mg/L			01/31/17 11:29	1



# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

## Qualifiers

### HPLC/IC

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.
E	Result exceeded calibration range.

### 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.

## 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 Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-132828-13**

**Date Collected: 01/24/17 12:10**

**Matrix: Water**

**Date Received: 01/27/17 09:07**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340584	02/01/17 14:31	KH1	TAL PEN
Total/NA	Analysis	300.0		1	341083	02/06/17 18:25	KH1	TAL PEN
Total Recoverable	Prep	3005A			340229	01/30/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340556	01/31/17 14:29	DRE	TAL PEN
Total/NA	Prep	7470A			340283	01/30/17 10:32	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340497	01/31/17 13:45	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	340187	01/28/17 14:45	TET	TAL PEN

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-132828-14**

**Date Collected: 01/24/17 13:20**

**Matrix: Water**

**Date Received: 01/27/17 09:07**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340584	02/01/17 15:39	KH1	TAL PEN
Total/NA	Analysis	300.0		10	340798	02/02/17 17:54	KH1	TAL PEN
Total/NA	Analysis	300.0		50	340885	02/03/17 12:18	KH1	TAL PEN
Total Recoverable	Prep	3005A			340229	01/30/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340556	01/31/17 14:33	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		340229	01/30/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020	DL	25	340556	01/31/17 15:05	DRE	TAL PEN
Total/NA	Prep	7470A			340283	01/30/17 10:32	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340497	01/31/17 14:00	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	340187	01/28/17 14:45	TET	TAL PEN

**Client Sample ID: WGWC-14**

**Lab Sample ID: 400-132828-15**

**Date Collected: 01/27/17 09:40**

**Matrix: Water**

**Date Received: 01/28/17 08:49**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340336	01/31/17 08:08	KH1	TAL PEN
Total Recoverable	Prep	3005A			340229	01/30/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340556	01/31/17 14:38	DRE	TAL PEN
Total/NA	Prep	7470A			340283	01/30/17 10:32	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340497	01/31/17 14:01	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	340469	01/31/17 14:32	TET	TAL PEN

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-132828-16**

**Date Collected: 01/27/17 10:10**

**Matrix: Water**

**Date Received: 01/28/17 08:49**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340336	01/31/17 08:31	KH1	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-132828-16**

Date Collected: 01/27/17 10:10

Matrix: Water

Date Received: 01/28/17 08:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			340229	01/30/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340556	01/31/17 14:42	DRE	TAL PEN
Total/NA	Prep	7470A			340283	01/30/17 10:32	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340497	01/31/17 14:03	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	340469	01/31/17 14:32	TET	TAL PEN

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-132828-17**

Date Collected: 01/27/17 11:15

Matrix: Water

Date Received: 01/28/17 08:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340336	01/31/17 09:39	KH1	TAL PEN
Total Recoverable	Prep	3005A			340229	01/30/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340556	01/31/17 14:47	DRE	TAL PEN
Total/NA	Prep	7470A			340283	01/30/17 10:32	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340497	01/31/17 14:04	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	340469	01/31/17 14:32	TET	TAL PEN

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-132828-18**

Date Collected: 01/27/17 11:55

Matrix: Water

Date Received: 01/28/17 08:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340336	01/31/17 10:02	KH1	TAL PEN
Total Recoverable	Prep	3005A			340229	01/30/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340556	01/31/17 14:51	DRE	TAL PEN
Total/NA	Prep	7470A			340283	01/30/17 10:32	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340497	01/31/17 14:05	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	340469	01/31/17 14:32	TET	TAL PEN

**Client Sample ID: DUP-2**

**Lab Sample ID: 400-132828-19**

Date Collected: 01/27/17 00:00

Matrix: Water

Date Received: 01/28/17 08:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340336	01/31/17 10:25	KH1	TAL PEN
Total Recoverable	Prep	3005A			340229	01/30/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	340556	01/31/17 14:56	DRE	TAL PEN
Total/NA	Prep	7470A			340283	01/30/17 10:32	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340497	01/31/17 14:06	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	340429	01/31/17 11:29	TET	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

**Laboratory References:**

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

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# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

## HPLC/IC

### Analysis Batch: 340336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-15	WGWC-14	Total/NA	Water	300.0	
400-132828-16	WGWC-12	Total/NA	Water	300.0	
400-132828-17	WGWC-13	Total/NA	Water	300.0	
400-132828-18	WGWC-11	Total/NA	Water	300.0	
400-132828-19	DUP-2	Total/NA	Water	300.0	
MB 400-340336/34	Method Blank	Total/NA	Water	300.0	
LCS 400-340336/35	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-340336/36	Lab Control Sample Dup	Total/NA	Water	300.0	
400-132731-B-9 MS	Matrix Spike	Total/NA	Water	300.0	
400-132731-B-9 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 340584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-13	WGWC-15	Total/NA	Water	300.0	
400-132828-14	WGWC-16	Total/NA	Water	300.0	
MB 400-340584/4	Method Blank	Total/NA	Water	300.0	
LCS 400-340584/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-340584/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-132828-13 MS	WGWC-15	Total/NA	Water	300.0	
400-132828-13 MSD	WGWC-15	Total/NA	Water	300.0	

### Analysis Batch: 340798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-14	WGWC-16	Total/NA	Water	300.0	
MB 400-340798/4	Method Blank	Total/NA	Water	300.0	
LCS 400-340798/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-340798/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-132828-14 MS	WGWC-16	Total/NA	Water	300.0	
400-132828-14 MSD	WGWC-16	Total/NA	Water	300.0	

### Analysis Batch: 340885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-14	WGWC-16	Total/NA	Water	300.0	
MB 400-340885/4	Method Blank	Total/NA	Water	300.0	
LCS 400-340885/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-340885/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-133233-A-9 MS	Matrix Spike	Total/NA	Water	300.0	
400-133233-A-9 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 341083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-13	WGWC-15	Total/NA	Water	300.0	
MB 400-341083/4	Method Blank	Total/NA	Water	300.0	
LCS 400-341083/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-341083/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-133233-A-14 MS	Matrix Spike	Total/NA	Water	300.0	
400-133233-A-14 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

## Metals

### Prep Batch: 340229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-13	WGWC-15	Total Recoverable	Water	3005A	
400-132828-14 - DL	WGWC-16	Total Recoverable	Water	3005A	
400-132828-14	WGWC-16	Total Recoverable	Water	3005A	
400-132828-15	WGWC-14	Total Recoverable	Water	3005A	
400-132828-16	WGWC-12	Total Recoverable	Water	3005A	
400-132828-17	WGWC-13	Total Recoverable	Water	3005A	
400-132828-18	WGWC-11	Total Recoverable	Water	3005A	
400-132828-19	DUP-2	Total Recoverable	Water	3005A	
MB 400-340229/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-340229/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-133164-D-7-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-133164-D-7-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Prep Batch: 340283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-13	WGWC-15	Total/NA	Water	7470A	
400-132828-14	WGWC-16	Total/NA	Water	7470A	
400-132828-15	WGWC-14	Total/NA	Water	7470A	
400-132828-16	WGWC-12	Total/NA	Water	7470A	
400-132828-17	WGWC-13	Total/NA	Water	7470A	
400-132828-18	WGWC-11	Total/NA	Water	7470A	
400-132828-19	DUP-2	Total/NA	Water	7470A	
MB 400-340283/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-340283/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-132828-13 MS	WGWC-15	Total/NA	Water	7470A	
400-132828-13 MSD	WGWC-15	Total/NA	Water	7470A	

### Analysis Batch: 340497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-13	WGWC-15	Total/NA	Water	7470A	340283
400-132828-14	WGWC-16	Total/NA	Water	7470A	340283
400-132828-15	WGWC-14	Total/NA	Water	7470A	340283
400-132828-16	WGWC-12	Total/NA	Water	7470A	340283
400-132828-17	WGWC-13	Total/NA	Water	7470A	340283
400-132828-18	WGWC-11	Total/NA	Water	7470A	340283
400-132828-19	DUP-2	Total/NA	Water	7470A	340283
MB 400-340283/14-A	Method Blank	Total/NA	Water	7470A	340283
LCS 400-340283/15-A	Lab Control Sample	Total/NA	Water	7470A	340283
400-132828-13 MS	WGWC-15	Total/NA	Water	7470A	340283
400-132828-13 MSD	WGWC-15	Total/NA	Water	7470A	340283

### Analysis Batch: 340556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-13	WGWC-15	Total Recoverable	Water	6020	340229
400-132828-14	WGWC-16	Total Recoverable	Water	6020	340229
400-132828-14 - DL	WGWC-16	Total Recoverable	Water	6020	340229
400-132828-15	WGWC-14	Total Recoverable	Water	6020	340229
400-132828-16	WGWC-12	Total Recoverable	Water	6020	340229
400-132828-17	WGWC-13	Total Recoverable	Water	6020	340229
400-132828-18	WGWC-11	Total Recoverable	Water	6020	340229
400-132828-19	DUP-2	Total Recoverable	Water	6020	340229

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

## Metals (Continued)

### Analysis Batch: 340556 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-340229/1-A ^5	Method Blank	Total Recoverable	Water	6020	340229
LCS 400-340229/2-A	Lab Control Sample	Total Recoverable	Water	6020	340229
400-133164-D-7-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	340229
400-133164-D-7-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	340229

## General Chemistry

### Analysis Batch: 340187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-13	WGWC-15	Total/NA	Water	SM 2540C	
400-132828-14	WGWC-16	Total/NA	Water	SM 2540C	
MB 400-340187/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-340187/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-132829-B-14 DU	Duplicate	Total/NA	Water	SM 2540C	
400-133145-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	

### Analysis Batch: 340429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-19	DUP-2	Total/NA	Water	SM 2540C	
MB 400-340429/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-340429/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-132829-B-21 DU	Duplicate	Total/NA	Water	SM 2540C	

### Analysis Batch: 340469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-15	WGWC-14	Total/NA	Water	SM 2540C	
400-132828-16	WGWC-12	Total/NA	Water	SM 2540C	
400-132828-17	WGWC-13	Total/NA	Water	SM 2540C	
400-132828-18	WGWC-11	Total/NA	Water	SM 2540C	
MB 400-340469/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-340469/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-132918-A-14 DU	Duplicate	Total/NA	Water	SM 2540C	
400-133233-A-14 DU	Duplicate	Total/NA	Water	SM 2540C	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 400-340336/34**  
**Matrix: Water**  
**Analysis Batch: 340336**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			01/30/17 22:37	1
Fluoride	<0.082		0.20	0.082	mg/L			01/30/17 22:37	1
Sulfate	<0.70		1.0	0.70	mg/L			01/30/17 22:37	1

**Lab Sample ID: LCS 400-340336/35**  
**Matrix: Water**  
**Analysis Batch: 340336**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.0		mg/L		100	90 - 110
Fluoride	10.0	10.5		mg/L		105	90 - 110
Sulfate	10.0	10.3		mg/L		103	90 - 110

**Lab Sample ID: LCSD 400-340336/36**  
**Matrix: Water**  
**Analysis Batch: 340336**

**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	10.0	9.98		mg/L		100	90 - 110	1	15
Fluoride	10.0	10.5		mg/L		105	90 - 110	0	15
Sulfate	10.0	10.3		mg/L		103	90 - 110	0	15

**Lab Sample ID: 400-132731-B-9 MS**  
**Matrix: Water**  
**Analysis Batch: 340336**

**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	20		100	116		mg/L		97	80 - 120
Fluoride	<0.82		100	106		mg/L		106	80 - 120
Sulfate	280		100	376		mg/L		98	80 - 120

**Lab Sample ID: 400-132731-B-9 MSD**  
**Matrix: Water**  
**Analysis Batch: 340336**

**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	20		100	116		mg/L		97	80 - 120	0	20
Fluoride	<0.82		100	106		mg/L		106	80 - 120	0	20
Sulfate	280		100	377		mg/L		98	80 - 120	0	20

**Lab Sample ID: MB 400-340584/4**  
**Matrix: Water**  
**Analysis Batch: 340584**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			02/01/17 11:28	1
Fluoride	<0.082		0.20	0.082	mg/L			02/01/17 11:28	1
Sulfate	<0.70		1.0	0.70	mg/L			02/01/17 11:28	1

TestAmerica Pensacola



# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 400-340584/5**  
**Matrix: Water**  
**Analysis Batch: 340584**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.68		mg/L		97	90 - 110
Fluoride	10.0	10.7		mg/L		107	90 - 110
Sulfate	10.0	10.2		mg/L		102	90 - 110

**Lab Sample ID: LCSD 400-340584/6**  
**Matrix: Water**  
**Analysis Batch: 340584**

**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	10.0	9.68		mg/L		97	90 - 110	0	15
Fluoride	10.0	10.7		mg/L		107	90 - 110	0	15
Sulfate	10.0	10.2		mg/L		102	90 - 110	0	15

**Lab Sample ID: 400-132828-13 MS**  
**Matrix: Water**  
**Analysis Batch: 340584**

**Client Sample ID: WGWC-15**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	4.0	^	10.0	14.1		mg/L		101	80 - 120
Fluoride	0.92		10.0	12.3		mg/L		114	80 - 120
Sulfate	34		10.0	44.5		mg/L		103	80 - 120

**Lab Sample ID: 400-132828-13 MSD**  
**Matrix: Water**  
**Analysis Batch: 340584**

**Client Sample ID: WGWC-15**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	4.0	^	10.0	14.1		mg/L		101	80 - 120	0	20
Fluoride	0.92		10.0	12.2		mg/L		112	80 - 120	1	20
Sulfate	34		10.0	44.6		mg/L		104	80 - 120	0	20

**Lab Sample ID: MB 400-340798/4**  
**Matrix: Water**  
**Analysis Batch: 340798**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			02/02/17 16:23	1
Fluoride	<0.082		0.20	0.082	mg/L			02/02/17 16:23	1
Sulfate	<0.70		1.0	0.70	mg/L			02/02/17 16:23	1

**Lab Sample ID: LCS 400-340798/5**  
**Matrix: Water**  
**Analysis Batch: 340798**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.0		mg/L		100	90 - 110
Fluoride	10.0	10.7		mg/L		107	90 - 110
Sulfate	10.0	10.3		mg/L		103	90 - 110

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCSD 400-340798/6**  
**Matrix: Water**  
**Analysis Batch: 340798**

**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	10.0	9.87		mg/L		99	90 - 110	1	15
Fluoride	10.0	10.6		mg/L		106	90 - 110	1	15
Sulfate	10.0	10.4		mg/L		104	90 - 110	1	15

**Lab Sample ID: 400-132828-14 MS**  
**Matrix: Water**  
**Analysis Batch: 340798**

**Client Sample ID: WGWC-16**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	310		100	403		mg/L		98	80 - 120
Fluoride	<0.82		100	108		mg/L		108	80 - 120
Sulfate	580	E	100	680	E 4	mg/L		98	80 - 120

**Lab Sample ID: 400-132828-14 MSD**  
**Matrix: Water**  
**Analysis Batch: 340798**

**Client Sample ID: WGWC-16**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	310		100	403		mg/L		98	80 - 120	0	20
Fluoride	<0.82		100	108		mg/L		108	80 - 120	0	20
Sulfate	580	E	100	680	E 4	mg/L		98	80 - 120	0	20

**Lab Sample ID: MB 400-340885/4**  
**Matrix: Water**  
**Analysis Batch: 340885**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			02/03/17 11:10	1
Fluoride	<0.082		0.20	0.082	mg/L			02/03/17 11:10	1
Sulfate	<0.70		1.0	0.70	mg/L			02/03/17 11:10	1

**Lab Sample ID: LCS 400-340885/5**  
**Matrix: Water**  
**Analysis Batch: 340885**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.76		mg/L		98	90 - 110
Fluoride	10.0	10.5		mg/L		105	90 - 110
Sulfate	10.0	10.0		mg/L		100	90 - 110

**Lab Sample ID: LCSD 400-340885/6**  
**Matrix: Water**  
**Analysis Batch: 340885**

**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	10.0	9.75		mg/L		97	90 - 110	0	15
Fluoride	10.0	10.4		mg/L		104	90 - 110	1	15
Sulfate	10.0	10.0		mg/L		100	90 - 110	0	15

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 400-133233-A-9 MS**  
**Matrix: Water**  
**Analysis Batch: 340885**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	3.9		10.0	14.0		mg/L		100	80 - 120
Fluoride	<0.082		10.0	10.9		mg/L		109	80 - 120
Sulfate	<0.70		10.0	11.1		mg/L		111	80 - 120

**Lab Sample ID: 400-133233-A-9 MSD**  
**Matrix: Water**  
**Analysis Batch: 340885**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	3.9		10.0	14.0		mg/L		101	80 - 120	0	20
Fluoride	<0.082		10.0	10.9		mg/L		109	80 - 120	0	20
Sulfate	<0.70		10.0	11.1		mg/L		111	80 - 120	0	20

**Lab Sample ID: MB 400-341083/4**  
**Matrix: Water**  
**Analysis Batch: 341083**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			02/06/17 10:49	1
Fluoride	<0.082		0.20	0.082	mg/L			02/06/17 10:49	1
Sulfate	<0.70		1.0	0.70	mg/L			02/06/17 10:49	1

**Lab Sample ID: LCS 400-341083/5**  
**Matrix: Water**  
**Analysis Batch: 341083**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.85		mg/L		98	90 - 110
Fluoride	10.0	10.6		mg/L		106	90 - 110
Sulfate	10.0	10.6		mg/L		106	90 - 110

**Lab Sample ID: LCSD 400-341083/6**  
**Matrix: Water**  
**Analysis Batch: 341083**

**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	10.0	9.85		mg/L		99	90 - 110	0	15
Fluoride	10.0	10.6		mg/L		106	90 - 110	0	15
Sulfate	10.0	10.6		mg/L		106	90 - 110	0	15

**Lab Sample ID: 400-133233-A-14 MS**  
**Matrix: Water**  
**Analysis Batch: 341083**

**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	5.6		50.0	54.7		mg/L		98	80 - 120
Fluoride	<0.41		50.0	53.7		mg/L		107	80 - 120
Sulfate	150		50.0	202		mg/L		95	80 - 120

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 400-133233-A-14 MSD**

**Matrix: Water**

**Analysis Batch: 341083**

**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	5.6		50.0	55.0		mg/L		99	80 - 120	0	20
Fluoride	<0.41		50.0	53.9		mg/L		108	80 - 120	0	20
Sulfate	150		50.0	202		mg/L		95	80 - 120	0	20

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

**Lab Sample ID: MB 400-340229/1-A ^5**

**Matrix: Water**

**Analysis Batch: 340556**

**Client Sample ID: Method Blank**

**Prep Type: Total Recoverable**

**Prep Batch: 340229**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/30/17 09:15	01/31/17 12:31	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/30/17 09:15	01/31/17 12:31	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/30/17 09:15	01/31/17 12:31	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/30/17 09:15	01/31/17 12:31	5
Boron	<0.021		0.050	0.021	mg/L		01/30/17 09:15	01/31/17 12:31	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/30/17 09:15	01/31/17 12:31	5
Calcium	<0.13		0.25	0.13	mg/L		01/30/17 09:15	01/31/17 12:31	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/30/17 09:15	01/31/17 12:31	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/30/17 09:15	01/31/17 12:31	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/30/17 09:15	01/31/17 12:31	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/30/17 09:15	01/31/17 12:31	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/30/17 09:15	01/31/17 12:31	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/30/17 09:15	01/31/17 12:31	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/30/17 09:15	01/31/17 12:31	5

**Lab Sample ID: LCS 400-340229/2-A**

**Matrix: Water**

**Analysis Batch: 340556**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total Recoverable**

**Prep Batch: 340229**

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	0.0508		mg/L		102	80 - 120
Barium	0.0500	0.0511		mg/L		102	80 - 120
Beryllium	0.0500	0.0515		mg/L		103	80 - 120
Boron	0.100	0.103		mg/L		103	80 - 120
Cadmium	0.0500	0.0515		mg/L		103	80 - 120
Calcium	5.00	4.84		mg/L		97	80 - 120
Chromium	0.0500	0.0499		mg/L		100	80 - 120
Cobalt	0.0500	0.0476		mg/L		95	80 - 120
Lead	0.0500	0.0506		mg/L		101	80 - 120
Lithium	0.0500	0.0482		mg/L		96	80 - 120
Molybdenum	0.100	0.101		mg/L		101	80 - 120
Selenium	0.0500	0.0498		mg/L		100	80 - 120
Thallium	0.0100	0.0102		mg/L		102	80 - 120
Nickel	0.0500	0.0504		mg/L		101	80 - 120
Vanadium	0.0500	0.0485		mg/L		97	80 - 120
Silver	0.0500	0.0520		mg/L		104	80 - 120

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

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

**Lab Sample ID: LCS 400-340229/2-A**  
**Matrix: Water**  
**Analysis Batch: 340556**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 340229**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	0.0500	0.0507		mg/L		101	80 - 120
Zinc	0.0500	0.0519		mg/L		104	80 - 120

**Lab Sample ID: 400-133164-D-7-B MS ^5**  
**Matrix: Water**  
**Analysis Batch: 340556**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 340229**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0542		mg/L		108	75 - 125
Arsenic	<0.00046		0.0500	0.0513		mg/L		103	75 - 125
Barium	0.012		0.0500	0.0643		mg/L		104	75 - 125
Beryllium	<0.00034		0.0500	0.0525		mg/L		105	75 - 125
Boron	0.14		0.100	0.260		mg/L		120	75 - 125
Cadmium	<0.00034		0.0500	0.0510		mg/L		102	75 - 125
Calcium	0.87		5.00	5.86		mg/L		100	75 - 125
Chromium	<0.0011		0.0500	0.0503		mg/L		101	75 - 125
Cobalt	<0.00040		0.0500	0.0522		mg/L		104	75 - 125
Lead	<0.00035		0.0500	0.0506		mg/L		101	75 - 125
Lithium	0.0054		0.0500	0.0545		mg/L		98	75 - 125
Molybdenum	<0.00085		0.100	0.102		mg/L		102	75 - 125
Selenium	<0.00024		0.0500	0.0502		mg/L		100	75 - 125
Thallium	<0.000085		0.0100	0.0102		mg/L		102	75 - 125
Nickel	0.0019	J	0.0500	0.0530		mg/L		102	75 - 125
Vanadium	0.0054		0.0500	0.0514		mg/L		92	75 - 125
Silver	<0.00011		0.0500	0.0519		mg/L		104	75 - 125
Copper	<0.0021		0.0500	0.0517		mg/L		103	75 - 125
Zinc	<0.0065		0.0500	0.0531		mg/L		106	75 - 125

**Lab Sample ID: 400-133164-D-7-C MSD ^5**  
**Matrix: Water**  
**Analysis Batch: 340556**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 340229**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	<0.0010		0.0500	0.0535		mg/L		107	75 - 125	1	20
Arsenic	<0.00046		0.0500	0.0515		mg/L		103	75 - 125	0	20
Barium	0.012		0.0500	0.0639		mg/L		103	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0529		mg/L		106	75 - 125	1	20
Boron	0.14		0.100	0.257		mg/L		117	75 - 125	1	20
Cadmium	<0.00034		0.0500	0.0516		mg/L		103	75 - 125	1	20
Calcium	0.87		5.00	5.76		mg/L		98	75 - 125	2	20
Chromium	<0.0011		0.0500	0.0512		mg/L		102	75 - 125	2	20
Cobalt	<0.00040		0.0500	0.0524		mg/L		105	75 - 125	0	20
Lead	<0.00035		0.0500	0.0508		mg/L		102	75 - 125	0	20
Lithium	0.0054		0.0500	0.0538		mg/L		97	75 - 125	1	20
Molybdenum	<0.00085		0.100	0.0999		mg/L		100	75 - 125	2	20
Selenium	<0.00024		0.0500	0.0500		mg/L		100	75 - 125	0	20
Thallium	<0.000085		0.0100	0.0102		mg/L		102	75 - 125	0	20
Nickel	0.0019	J	0.0500	0.0535		mg/L		103	75 - 125	1	20
Vanadium	0.0054		0.0500	0.0529		mg/L		95	75 - 125	3	20

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

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

**Lab Sample ID: 400-133164-D-7-C MSD ^5**  
**Matrix: Water**  
**Analysis Batch: 340556**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 340229**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
	Silver	<0.00011		0.0500	0.0508		mg/L		102	75 - 125	2
Copper	<0.0021		0.0500	0.0523		mg/L		105	75 - 125	1	20
Zinc	<0.0065		0.0500	0.0542		mg/L		108	75 - 125	2	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 400-340283/14-A**  
**Matrix: Water**  
**Analysis Batch: 340497**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 340283**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Mercury	<0.000070		0.00020	0.000070	mg/L		01/30/17 10:32	01/31/17 13:43

**Lab Sample ID: LCS 400-340283/15-A**  
**Matrix: Water**  
**Analysis Batch: 340497**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 340283**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
		Mercury	0.00101	0.000965	mg/L		96

**Lab Sample ID: 400-132828-13 MS**  
**Matrix: Water**  
**Analysis Batch: 340497**

**Client Sample ID: WGWC-15**  
**Prep Type: Total/NA**  
**Prep Batch: 340283**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
	Mercury	<0.000070		0.00201	0.00195		mg/L		97

**Lab Sample ID: 400-132828-13 MSD**  
**Matrix: Water**  
**Analysis Batch: 340497**

**Client Sample ID: WGWC-15**  
**Prep Type: Total/NA**  
**Prep Batch: 340283**

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

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

**Lab Sample ID: MB 400-340187/1**  
**Matrix: Water**  
**Analysis Batch: 340187**

**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			01/28/17 14:45

**Lab Sample ID: LCS 400-340187/2**  
**Matrix: Water**  
**Analysis Batch: 340187**

**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	258	mg/L		88

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

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

**Lab Sample ID: 400-132829-B-14 DU**  
**Matrix: Water**  
**Analysis Batch: 340187**

**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	72		72.0		mg/L		0	5

**Lab Sample ID: 400-133145-A-1 DU**  
**Matrix: Water**  
**Analysis Batch: 340187**

**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	340		344		mg/L		0	5

**Lab Sample ID: MB 400-340429/1**  
**Matrix: Water**  
**Analysis Batch: 340429**

**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			01/31/17 11:29	1

**Lab Sample ID: LCS 400-340429/2**  
**Matrix: Water**  
**Analysis Batch: 340429**

**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	270		mg/L		92	78 - 122

**Lab Sample ID: 400-132829-B-21 DU**  
**Matrix: Water**  
**Analysis Batch: 340429**

**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	68		70.0		mg/L		3	5

**Lab Sample ID: MB 400-340469/1**  
**Matrix: Water**  
**Analysis Batch: 340469**

**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			01/31/17 14:32	1

**Lab Sample ID: LCS 400-340469/2**  
**Matrix: Water**  
**Analysis Batch: 340469**

**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	282		mg/L		96	78 - 122

**Lab Sample ID: 400-132918-A-14 DU**  
**Matrix: Water**  
**Analysis Batch: 340469**

**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	58		58.0		mg/L		0	5

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-3  
 SDG: Ash Pond

**Lab Sample ID: 400-133233-A-14 DU**  
**Matrix: Water**  
**Analysis Batch: 340469**

**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	320		322		mg/L		0	5

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- 2
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- 14



# Chain of Custody Record

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

ISSIAMI IBIKUU  
TAP 1-800-338-8467

Carrier Tracking No(s): \_\_\_\_\_

Lab PM: Whitimire, Cheyenne R  
E-Mail: cheyenne.whitimire@testamericainc.com

Sampler: C. Hurde & Phone: \_\_\_\_\_

Client Information  
Client Contact: Joju Abraham  
Company: Southern Company  
Address: 241 Ralph McGill Blvd SE B10185  
City: Atlanta  
State/Zip: GA, 30308  
Phone: 404-506-7239  
Email: JAbraham@southernco.com  
Project Name: Plant Wansley - Ash Pond  
Site: CCR

Due Date Requested: \_\_\_\_\_

TAT Requested (days): \_\_\_\_\_


PO #: \_\_\_\_\_

WO #: \_\_\_\_\_

Project #: \_\_\_\_\_

SSOW#: \_\_\_\_\_

Analysis Requested

QR Code: 

400-132828 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: \_\_\_\_\_

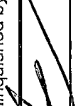
M - Hexane  
N - None  
O - AsNaO2  
P - Na2O4S  
Q - Na2SO3  
R - Na2S2O3  
S - H2SO4  
T - TSP Dodecahydrate  
U - Acetone  
V - MCAA  
W - ph 4-5  
Z - other (specify)

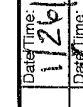
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste, oil, etc. Tissue, Air)	Field Filled Sample (Yes or No)		TDS - SM 2540C: Cl, F, SO4 - EPA 300		Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470		Radium 226 & 228 - SW-846 9315 & 9320		Total Number of Containers	Special Instructions/Note:
					I	D	I	D	I	D	I	D		
WGWC-15	1/24/17	1210	G	W	X	X	X	X	X	X	X	X	3	
WGWC-16	1/24/17	1320	G	W	X	X	X	X	X	X	X	X	3	

Possible Hazard Identification  
 Non-Hazard  
 Flammable  
 Skin Irritant  
 Poison B  
 Unknown  
 Radiological

Deliverable Requested: I, II, III, IV, Other (specify) \_\_\_\_\_

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_

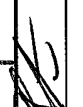
Relinquished by:  Date: 1/26/2017 09:50 Company: ERW


Relinquished by:  Date: 1/26/17 1600 Company: ERW

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Company: \_\_\_\_\_

Special Instructions/QC Requirements:  
 Return To Client  
 Disposal By Lab  
 Archive For \_\_\_\_\_ Months

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Received by:  Date/Time: 1/26/17 950 Company: ERW

Received by:  Date/Time: 1/27/17 0907 Company: ERW

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

Method of Shipment: \_\_\_\_\_

Cooler Temperature(s) °C and Other Remarks: 1-30C JKL

Custody Seals Intact: \_\_\_\_\_ Custody Seal No.: \_\_\_\_\_



**Chain of Custody Record**

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

**Client Information**  
 Client Contact: Joju Abraham  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10186  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

**Sampler:** J. Morrison, Jr. M. Rogers MK  
**Lab PIV:** Whitnire, Cheyenne R  
**Carrier Tracking No(s):**  
**Phone:**  
**E-Mail:** cheyenne.whitnire@testamericainc.com  
**Job #:**

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wast/oli, B=soil, T=tissue, A=air)	Analysis Requested				Total Number of Containers	Special Instructions/Note:
					TDS - SM 2540C ; Cl, F, SO4 - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9316 & 9320	Field Filtered Sample (Yes or No)		
WGWC-14	1/27/17	0940	G	W	X	X	X	X	3	
WGWC-12	1/27/17	1010	G	W	X	X	X	X	3	
WGWC-13	1/27/17	1115	G	W	X	X	X	X	4	Extra radiological container collected for lab QA/QC
WGWC-11	1/27/17	1155	G	W	X	X	X	X	3	
DUP-2	1/27/17	-	G	W	X	X	X	X	3	

**Possible Hazard Identification**  
 Non-Hazard  
 Flammable  
 Skin Irritant  
 Poison B  
 Unknown  
 Radiological

**Deliverable Requested:** I, II, III, IV, Other (specify):  
 I, II, III, IV, Other (specify):  
 I-27-17 / 15:15  
 I-27-17 16:07

*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:*  
 King Duf 1/27/17 15:15  
 JF 1-28-17 09:49  
 JF 1-28-17 15:15  
 JF 1-28-17 16:07



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132828-3

SDG Number: Ash Pond

**Login Number: 132828**

**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.	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	0.2°C, 2.6°C IR-2
Cooler Temperature is recorded.	True	0.0°C IR-7, 3.7°C IR-6, 1.3°C IR-7, 1.3°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 Wansley

TestAmerica Job ID: 400-132828-3  
SDG: Ash Pond

## 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: 400-132828-4

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Plant Wansley

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

2/24/2017 10:23:13 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

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

### LINKS

Review your project  
results through

TotalAccess

Have a Question?



Visit us at:

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

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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 Wansley

TestAmerica Job ID: 400-132828-4  
SDG: Ash Pond

**Job ID: 400-132828-4**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-132828-4

#### RAD

Method(s) PrecSep\_0: Radium-228 Prep Batch 160-290359: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: WGWC-15 (400-132828-13), WGWC-16 (400-132828-14), WGWC-14 (400-132828-15), WGWC-12 (400-132828-16), WGWC-13 (400-132828-17), WGWC-11 (400-132828-18) and DUP-2 (400-132828-19). 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 160-290358: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: WGWC-15 (400-132828-13), WGWC-16 (400-132828-14), WGWC-14 (400-132828-15), WGWC-12 (400-132828-16), WGWC-13 (400-132828-17), WGWC-11 (400-132828-18) and DUP-2 (400-132828-19). 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 Wansley

TestAmerica Job ID: 400-132828-4  
SDG: Ash Pond

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 Wansley

TestAmerica Job ID: 400-132828-4  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132828-13	WGWC-15	Water	01/24/17 12:10	01/27/17 09:07
400-132828-14	WGWC-16	Water	01/24/17 13:20	01/27/17 09:07
400-132828-15	WGWC-14	Water	01/27/17 09:40	01/28/17 08:49
400-132828-16	WGWC-12	Water	01/27/17 10:10	01/28/17 08:49
400-132828-17	WGWC-13	Water	01/27/17 11:15	01/28/17 08:49
400-132828-18	WGWC-11	Water	01/27/17 11:55	01/28/17 08:49
400-132828-19	DUP-2	Water	01/27/17 00:00	01/28/17 08:49



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-4  
SDG: Ash Pond

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-132828-13**

Date Collected: 01/24/17 12:10

Matrix: Water

Date Received: 01/27/17 09:07

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.225	U	0.189	0.190	1.00	0.281	pCi/L	01/31/17 18:03	02/22/17 06:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110					01/31/17 18:03	02/22/17 06:32	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.555		0.306	0.310	1.00	0.462	pCi/L	01/31/17 18:30	02/21/17 13:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110					01/31/17 18:30	02/21/17 13:12	1
Y Carrier	86.0		40 - 110					01/31/17 18:30	02/21/17 13:12	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.779		0.359	0.364	5.00	0.462	pCi/L		02/22/17 15:30	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-4  
SDG: Ash Pond

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-132828-14**

Date Collected: 01/24/17 13:20

Matrix: Water

Date Received: 01/27/17 09:07

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.935		0.302	0.313	1.00	0.261	pCi/L	01/31/17 18:03	02/22/17 06:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.8		40 - 110					01/31/17 18:03	02/22/17 06:32	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.75		0.378	0.411	1.00	0.426	pCi/L	01/31/17 18:30	02/21/17 13:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.8		40 - 110					01/31/17 18:30	02/21/17 13:12	1
Y Carrier	86.4		40 - 110					01/31/17 18:30	02/21/17 13:12	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.68		0.484	0.517	5.00	0.426	pCi/L		02/22/17 15:30	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-4  
SDG: Ash Pond

**Client Sample ID: WGWC-14**

**Lab Sample ID: 400-132828-15**

Date Collected: 01/27/17 09:40

Matrix: Water

Date Received: 01/28/17 08:49

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.694		0.253	0.261	1.00	0.242	pCi/L	01/31/17 18:03	02/22/17 06:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.0		40 - 110					01/31/17 18:03	02/22/17 06:32	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.741		0.290	0.298	1.00	0.404	pCi/L	01/31/17 18:30	02/21/17 13:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.0		40 - 110					01/31/17 18:30	02/21/17 13:12	1
Y Carrier	86.7		40 - 110					01/31/17 18:30	02/21/17 13:12	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.43		0.385	0.396	5.00	0.404	pCi/L		02/22/17 15:30	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-4  
SDG: Ash Pond

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-132828-16**

Date Collected: 01/27/17 10:10

Matrix: Water

Date Received: 01/28/17 08:49

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.338		0.209	0.211	1.00	0.280	pCi/L	01/31/17 18:03	02/22/17 06:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.8		40 - 110					01/31/17 18:03	02/22/17 06:32	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.498		0.279	0.283	1.00	0.421	pCi/L	01/31/17 18:30	02/21/17 13:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.8		40 - 110					01/31/17 18:30	02/21/17 13:12	1
Y Carrier	83.0		40 - 110					01/31/17 18:30	02/21/17 13:12	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.836		0.349	0.353	5.00	0.421	pCi/L		02/22/17 15:30	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-4  
SDG: Ash Pond

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-132828-17**

Date Collected: 01/27/17 11:15

Matrix: Water

Date Received: 01/28/17 08:49

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.289		0.198	0.200	1.00	0.273	pCi/L	01/31/17 18:03	02/22/17 06:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.0		40 - 110					01/31/17 18:03	02/22/17 06:33	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.378	U	0.251	0.253	1.00	0.386	pCi/L	01/31/17 18:30	02/21/17 13:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.0		40 - 110					01/31/17 18:30	02/21/17 13:12	1
Y Carrier	87.1		40 - 110					01/31/17 18:30	02/21/17 13:12	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.668		0.319	0.322	5.00	0.386	pCi/L		02/22/17 15:30	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-4  
SDG: Ash Pond

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-132828-18**

**Date Collected: 01/27/17 11:55**

**Matrix: Water**

**Date Received: 01/28/17 08:49**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.619		0.273	0.278	1.00	0.314	pCi/L	01/31/17 18:03	02/22/17 06:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.7		40 - 110					01/31/17 18:03	02/22/17 06:35	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.279	U	0.271	0.272	1.00	0.438	pCi/L	01/31/17 18:30	02/21/17 13:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.7		40 - 110					01/31/17 18:30	02/21/17 13:12	1
Y Carrier	77.4		40 - 110					01/31/17 18:30	02/21/17 13:12	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.898		0.384	0.389	5.00	0.438	pCi/L		02/22/17 15:30	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-4  
SDG: Ash Pond

**Client Sample ID: DUP-2**

**Lab Sample ID: 400-132828-19**

**Date Collected: 01/27/17 00:00**

**Matrix: Water**

**Date Received: 01/28/17 08:49**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.772		0.282	0.291	1.00	0.281	pCi/L	01/31/17 18:03	02/22/17 06:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110					01/31/17 18:03	02/22/17 06:35	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.591		0.272	0.278	1.00	0.393	pCi/L	01/31/17 18:30	02/21/17 13:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110					01/31/17 18:30	02/21/17 13:12	1
Y Carrier	83.4		40 - 110					01/31/17 18:30	02/21/17 13:12	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.36		0.392	0.402	5.00	0.393	pCi/L		02/22/17 15:30	1



# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-4  
SDG: Ash Pond

## 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 Wansley

TestAmerica Job ID: 400-132828-4  
SDG: Ash Pond

**Client Sample ID: WGWC-15**

**Date Collected: 01/24/17 12:10**

**Date Received: 01/27/17 09:07**

**Lab Sample ID: 400-132828-13**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			290358	01/31/17 18:03	AS	TAL SL
Total/NA	Analysis	9315		1	293879	02/22/17 06:32	RTM	TAL SL
Total/NA	Prep	PrecSep_0			290359	01/31/17 18:30	AS	TAL SL
Total/NA	Analysis	9320		1	293678	02/21/17 13:12	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	294074	02/22/17 15:30	RTM	TAL SL

**Client Sample ID: WGWC-16**

**Date Collected: 01/24/17 13:20**

**Date Received: 01/27/17 09:07**

**Lab Sample ID: 400-132828-14**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			290358	01/31/17 18:03	AS	TAL SL
Total/NA	Analysis	9315		1	293879	02/22/17 06:32	RTM	TAL SL
Total/NA	Prep	PrecSep_0			290359	01/31/17 18:30	AS	TAL SL
Total/NA	Analysis	9320		1	293678	02/21/17 13:12	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	294074	02/22/17 15:30	RTM	TAL SL

**Client Sample ID: WGWC-14**

**Date Collected: 01/27/17 09:40**

**Date Received: 01/28/17 08:49**

**Lab Sample ID: 400-132828-15**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			290358	01/31/17 18:03	AS	TAL SL
Total/NA	Analysis	9315		1	293879	02/22/17 06:32	RTM	TAL SL
Total/NA	Prep	PrecSep_0			290359	01/31/17 18:30	AS	TAL SL
Total/NA	Analysis	9320		1	293678	02/21/17 13:12	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	294074	02/22/17 15:30	RTM	TAL SL

**Client Sample ID: WGWC-12**

**Date Collected: 01/27/17 10:10**

**Date Received: 01/28/17 08:49**

**Lab Sample ID: 400-132828-16**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			290358	01/31/17 18:03	AS	TAL SL
Total/NA	Analysis	9315		1	293879	02/22/17 06:32	RTM	TAL SL
Total/NA	Prep	PrecSep_0			290359	01/31/17 18:30	AS	TAL SL
Total/NA	Analysis	9320		1	293678	02/21/17 13:12	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	294074	02/22/17 15:30	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-4  
SDG: Ash Pond

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-132828-17**

**Date Collected: 01/27/17 11:15**

**Matrix: Water**

**Date Received: 01/28/17 08:49**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			290358	01/31/17 18:03	AS	TAL SL
Total/NA	Analysis	9315		1	293879	02/22/17 06:33	RTM	TAL SL
Total/NA	Prep	PrecSep_0			290359	01/31/17 18:30	AS	TAL SL
Total/NA	Analysis	9320		1	293678	02/21/17 13:12	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	294074	02/22/17 15:30	RTM	TAL SL

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-132828-18**

**Date Collected: 01/27/17 11:55**

**Matrix: Water**

**Date Received: 01/28/17 08:49**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			290358	01/31/17 18:03	AS	TAL SL
Total/NA	Analysis	9315		1	293874	02/22/17 06:35	RTM	TAL SL
Total/NA	Prep	PrecSep_0			290359	01/31/17 18:30	AS	TAL SL
Total/NA	Analysis	9320		1	293678	02/21/17 13:12	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	294074	02/22/17 15:30	RTM	TAL SL

**Client Sample ID: DUP-2**

**Lab Sample ID: 400-132828-19**

**Date Collected: 01/27/17 00:00**

**Matrix: Water**

**Date Received: 01/28/17 08:49**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			290358	01/31/17 18:03	AS	TAL SL
Total/NA	Analysis	9315		1	293874	02/22/17 06:35	RTM	TAL SL
Total/NA	Prep	PrecSep_0			290359	01/31/17 18:30	AS	TAL SL
Total/NA	Analysis	9320		1	293678	02/21/17 13:12	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	294074	02/22/17 15:30	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 Wansley

TestAmerica Job ID: 400-132828-4  
 SDG: Ash Pond

## Rad

### Prep Batch: 290358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-13	WGWC-15	Total/NA	Water	PrecSep-21	
400-132828-14	WGWC-16	Total/NA	Water	PrecSep-21	
400-132828-15	WGWC-14	Total/NA	Water	PrecSep-21	
400-132828-16	WGWC-12	Total/NA	Water	PrecSep-21	
400-132828-17	WGWC-13	Total/NA	Water	PrecSep-21	
400-132828-18	WGWC-11	Total/NA	Water	PrecSep-21	
400-132828-19	DUP-2	Total/NA	Water	PrecSep-21	
MB 160-290358/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-290358/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-290358/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 290359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132828-13	WGWC-15	Total/NA	Water	PrecSep_0	
400-132828-14	WGWC-16	Total/NA	Water	PrecSep_0	
400-132828-15	WGWC-14	Total/NA	Water	PrecSep_0	
400-132828-16	WGWC-12	Total/NA	Water	PrecSep_0	
400-132828-17	WGWC-13	Total/NA	Water	PrecSep_0	
400-132828-18	WGWC-11	Total/NA	Water	PrecSep_0	
400-132828-19	DUP-2	Total/NA	Water	PrecSep_0	
MB 160-290359/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-290359/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-290359/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-4  
SDG: Ash Pond

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

**Lab Sample ID: MB 160-290358/1-A**  
**Matrix: Water**  
**Analysis Batch: 293875**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 290358**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.04186	U	0.150	0.150	1.00	0.321	pCi/L	01/31/17 18:03	02/22/17 06:29	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					01/31/17 18:03	02/22/17 06:29	1

**Lab Sample ID: LCS 160-290358/2-A**  
**Matrix: Water**  
**Analysis Batch: 293875**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 290358**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	6.01	7.114		0.997	1.00	0.287	pCi/L	118	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	89.7		40 - 110						

**Lab Sample ID: LCSD 160-290358/3-A**  
**Matrix: Water**  
**Analysis Batch: 293875**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 290358**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	6.01	7.099		0.980	1.00	0.261	pCi/L	118	68 - 137	0.01	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	92.0		40 - 110								

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

**Lab Sample ID: MB 160-290359/1-A**  
**Matrix: Water**  
**Analysis Batch: 293678**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 290359**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.6176		0.276	0.282	1.00	0.395	pCi/L	01/31/17 18:30	02/21/17 13:10	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					01/31/17 18:30	02/21/17 13:10	1
Y Carrier	81.9		40 - 110					01/31/17 18:30	02/21/17 13:10	1

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-4  
 SDG: Ash Pond

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

**Lab Sample ID: LCS 160-290359/2-A**  
**Matrix: Water**  
**Analysis Batch: 293678**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 290359**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.8	15.92		1.72	1.00	0.394	pCi/L	115	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	89.7		40 - 110
Y Carrier	78.5		40 - 110

**Lab Sample ID: LCSD 160-290359/3-A**  
**Matrix: Water**  
**Analysis Batch: 293678**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 290359**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	Limit
Radium-228	13.8	13.73		1.49	1.00	0.353	pCi/L	99	56 - 140	0.68	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	92.0		40 - 110
Y Carrier	84.5		40 - 110

# Chain of Custody Record

891-Atlanta  
Southern Company

## Client Information

Client Contact:  
Joju Abraham

Company:  
Southern Company

Address:  
241 Ralph McGill Blvd SE B10185

City:  
Atlanta

State/Zip:  
GA, 30308

Phone:  
404-506-7239

Email:  
JAbraham@southernco.com

Project Name:  
Plant Wansley - Ash Pond

Site:  
CCR

Sampler:  
C. Hurde &

Phone:

Lab P/M:

Whitmore, Cheyenne R  
E-Mail:  
cheyenne.whitmore@testamericainc.com

Carrier Tracking No(s):


COC No:

Page:

Job #:

## Analysis Requested

Due Date Requested:  
TAT Requested (days):  
PO #:  
WO #:  
Project #:  
SSOW#:

QR Code:   
400-132828 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:
- 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
  - Z - other (specify)

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=oil, T=tissue, A=air)	Field Filtered Sample (Yes or No)		Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470		Radium 226 & 228 - SW-846 9315 & 9320		Total Number of Containers	Special Instructions/Note:
					I	D	I	D	I	D		
WGWC-15	1/24/17	1210	G	W	X	X	X	X	X	X	3	
WGWC-16	1/24/17	1320	G	W	X	X	X	X	X	X	3	

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Special Instructions/QC Requirements:

Relinquished by:	Date:	Time:	Company:	Method of Shipment:
<i>[Signature]</i>	1/26/2017	09:50	ERW	
<i>[Signature]</i>	1/26/17	1600	ERW	
<i>[Signature]</i>	1/26/17	9:50	ERW	
<i>[Signature]</i>	1/27/17	0:00	ERW	

Custody Seals Intact:  Custody Seal No.:  
 Cooler Temperature(s) °C and Other Remarks: 1.3°C Jkz



**Chain of Custody Record**

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

**Client Information**  
 Client Contact: Joju Abraham  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10186  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

**Sampler:** J. Morrison, Jr. M. Rogers MK  
**Lab PIV:** Whitnire, Cheyenne R  
**Carrier Tracking No(s):**  
**Phone:**  
**E-Mail:** cheyenne.whitnire@testamericainc.com  
**Job #:**

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wast/oli, B=soil, T=tissue, A=air)	Preservation Code	Analysis Requested				Total Number of Containers	Special Instructions/Note
						TDS - SM 2540C ; Cl, F, SO4 - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320	Field Filtered Sample (Yes or No)		
WGWC-14	1/27/17	0940	G	W	X	X	X	X	3		
WGWC-12	1/27/17	1010	G	W	X	X	X	X	3		
WGWC-13	1/27/17	1115	G	W	X	X	X	X	4	Extra radiological container collected for lab QA/QC	
WGWC-11	1/27/17	1155	G	W	X	X	X	X	3		
DUP-2	1/27/17	-	G	W	X	X	X	X			

**Possible Hazard Identification**  
 Non-Hazard  
 Flammable  
 Skin Irritant  
 Poison B  
 Unknown  
 Radiological

**Deliverable Requested:** I, II, III, IV, Other (specify) \_\_\_\_\_

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  
 Disposal By Lab. Archive For \_\_\_\_\_ Months

*Myles Rogers*  
*1-27-17 15:15*  
*1-27-17 16:07*  
*1-28-17 09:49*  
*1-27-17 15:15*  
*1-27-17 15:15*





## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132828-4

SDG Number: Ash Pond

**Login Number: 132828**

**List Number: 1**

**Creator: Siddoway, Benjamin**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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	0.2°C, 2.6°C IR-2
Cooler Temperature is recorded.	True	0.0°C IR-7, 3.7°C IR-6, 1.3°C IR-7, 1.3°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	

# Certification Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-4  
SDG: Ash Pond

## Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP Secondary AB	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

## Laboratory: TestAmerica St. Louis

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-17
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-17 *
Florida	NELAP	4	E87689	06-30-17
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17
Nevada	State Program	9	MO000542017-1	07-31-17
New Jersey	NELAP	2	MO002	06-30-17
New York	NELAP	2	11616	03-31-17 *

\* Certification renewal pending - certification considered valid.

# Certification Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-132828-4  
SDG: Ash Pond

## Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
North Dakota	State Program	8	R207	06-30-17
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-17 *
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

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: 400-133597-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Plant Wansley

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

2/24/2017 12:49:52 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

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

### LINKS

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results through

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

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

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

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# Case Narrative

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

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**Job ID: 400-133597-1**

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**Laboratory: TestAmerica Pensacola**

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**Narrative**

**Job Narrative  
400-133597-1**

**HPLC/IC**

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: WGWC-8 (400-133597-5) and WGWC-9 (400-133597-7). Elevated reporting limits (RLs) are provided.

**Metals**

Method(s) 6020: The initial calibration verification (ICV) standard for batch 341975 expired on the analytical date. All ICV results were within the control limit. Sample results have been reported as qualified data.

Method(s) 7470A: The method blank for prep batch 341560 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.



# Detection Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

## Client Sample ID: WGWC-10

## Lab Sample ID: 400-133597-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.15	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	2.7		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.041		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	9.1		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	0.00072	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.016		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Mercury	0.000083	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	24		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FB-2

## Lab Sample ID: 400-133597-2

No Detections.

## Client Sample ID: WGWC-19

## Lab Sample ID: 400-133597-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.6		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.45		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	3.7		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.0018	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	11		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00058	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.050		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0010	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Mercury	0.00012	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	36		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FERB-2

## Lab Sample ID: 400-133597-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.000096	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

## Client Sample ID: WGWC-8

## Lab Sample ID: 400-133597-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	33		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.27		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	180		5.0	3.5	mg/L	5		300.0	Total/NA
Barium	0.0011	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.0017	J	0.0025	0.00034	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 Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

## Client Sample ID: WGWC-8 (Continued)

## Lab Sample ID: 400-133597-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1.8		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	41		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.012		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.0033		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Mercury	0.000078	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	330		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-14A

## Lab Sample ID: 400-133597-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.5		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	4.3		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.037		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	3.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0051		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0039	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Thallium	0.00011	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	54		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-9

## Lab Sample ID: 400-133597-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.5		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	1.3		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	60		5.0	3.5	mg/L	5		300.0	Total/NA
Arsenic	0.0017		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.0015	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00041	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Boron	0.61		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	10		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00073	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.040		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.018		0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0023		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	180		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola



# Method Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN

#### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-133597-1	WGWC-10	Water	02/06/17 12:15	02/08/17 08:55
400-133597-2	FB-2	Water	02/06/17 12:30	02/08/17 08:55
400-133597-3	WGWC-19	Water	02/06/17 12:40	02/08/17 08:55
400-133597-4	FERB-2	Water	02/06/17 13:10	02/08/17 08:55
400-133597-5	WGWC-8	Water	02/06/17 14:05	02/08/17 08:55
400-133597-6	WGWC-14A	Water	02/08/17 14:05	02/10/17 08:52
400-133597-7	WGWC-9	Water	02/09/17 10:55	02/10/17 08:52

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# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-133597-1**

**Date Collected: 02/06/17 12:15**

**Matrix: Water**

**Date Received: 02/08/17 08:55**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4		1.0	0.89	mg/L			02/10/17 23:08	1
Fluoride	0.15	J	0.20	0.082	mg/L			02/10/17 23:08	1
Sulfate	2.7		1.0	0.70	mg/L			02/10/17 23:08	1

### 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		02/09/17 10:32	02/10/17 12:41	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		02/09/17 10:32	02/10/17 12:41	5
Barium	0.041		0.0025	0.00049	mg/L		02/09/17 10:32	02/10/17 12:41	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/09/17 10:32	02/10/17 12:41	5
Boron	<0.021		0.050	0.021	mg/L		02/09/17 10:32	02/10/17 12:41	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/09/17 10:32	02/10/17 12:41	5
Calcium	9.1		0.25	0.13	mg/L		02/09/17 10:32	02/10/17 12:41	5
Chromium	0.0011	J	0.0025	0.0011	mg/L		02/09/17 10:32	02/10/17 12:41	5
Cobalt	0.00072	J	0.0025	0.00040	mg/L		02/09/17 10:32	02/10/17 12:41	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/09/17 10:32	02/10/17 12:41	5
Lithium	0.016		0.0050	0.0032	mg/L		02/09/17 10:32	02/10/17 12:41	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		02/09/17 10:32	02/10/17 12:41	5
Selenium	<0.00024		0.0013	0.00024	mg/L		02/09/17 10:32	02/10/17 12:41	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/09/17 10:32	02/10/17 12:41	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000083	J B	0.00020	0.000070	mg/L		02/09/17 08:55	02/10/17 13:50	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	24		5.0	3.4	mg/L			02/09/17 13:11	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

**Client Sample ID: FB-2**  
**Date Collected: 02/06/17 12:30**  
**Date Received: 02/08/17 08:55**

**Lab Sample ID: 400-133597-2**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			02/11/17 00:16	1
Fluoride	<0.082		0.20	0.082	mg/L			02/11/17 00:16	1
Sulfate	<0.70		1.0	0.70	mg/L			02/11/17 00:16	1

### 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		02/09/17 10:32	02/10/17 12:46	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		02/09/17 10:32	02/10/17 12:46	5
Barium	<0.00049		0.0025	0.00049	mg/L		02/09/17 10:32	02/10/17 12:46	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/09/17 10:32	02/10/17 12:46	5
Boron	<0.021		0.050	0.021	mg/L		02/09/17 10:32	02/10/17 12:46	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/09/17 10:32	02/10/17 12:46	5
Calcium	<0.13		0.25	0.13	mg/L		02/09/17 10:32	02/10/17 12:46	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/09/17 10:32	02/10/17 12:46	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		02/09/17 10:32	02/10/17 12:46	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/09/17 10:32	02/10/17 12:46	5
Lithium	<0.0032		0.0050	0.0032	mg/L		02/09/17 10:32	02/10/17 12:46	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		02/09/17 10:32	02/10/17 12:46	5
Selenium	<0.00024		0.0013	0.00024	mg/L		02/09/17 10:32	02/10/17 12:46	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/09/17 10:32	02/10/17 12:46	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		02/09/17 08:55	02/10/17 14:04	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			02/09/17 13:11	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

**Client Sample ID: WGWC-19**

**Date Collected: 02/06/17 12:40**

**Date Received: 02/08/17 08:55**

**Lab Sample ID: 400-133597-3**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.6		1.0	0.89	mg/L			02/11/17 00:39	1
Fluoride	0.45		0.20	0.082	mg/L			02/11/17 00:39	1
Sulfate	3.7		1.0	0.70	mg/L			02/11/17 00:39	1

### 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		02/09/17 10:32	02/10/17 12:50	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		02/09/17 10:32	02/10/17 12:50	5
Barium	0.0018	J	0.0025	0.00049	mg/L		02/09/17 10:32	02/10/17 12:50	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/09/17 10:32	02/10/17 12:50	5
Boron	<0.021		0.050	0.021	mg/L		02/09/17 10:32	02/10/17 12:50	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/09/17 10:32	02/10/17 12:50	5
Calcium	11		0.25	0.13	mg/L		02/09/17 10:32	02/10/17 12:50	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/09/17 10:32	02/10/17 12:50	5
Cobalt	0.00058	J	0.0025	0.00040	mg/L		02/09/17 10:32	02/10/17 12:50	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/09/17 10:32	02/10/17 12:50	5
Lithium	0.050		0.0050	0.0032	mg/L		02/09/17 10:32	02/10/17 12:50	5
Molybdenum	0.0010	J	0.015	0.00085	mg/L		02/09/17 10:32	02/10/17 12:50	5
Selenium	<0.00024		0.0013	0.00024	mg/L		02/09/17 10:32	02/10/17 12:50	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/09/17 10:32	02/10/17 12:50	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00012	J B	0.00020	0.000070	mg/L		02/09/17 08:55	02/10/17 14:05	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	36		5.0	3.4	mg/L			02/09/17 13:11	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

**Client Sample ID: FERB-2**  
**Date Collected: 02/06/17 13:10**  
**Date Received: 02/08/17 08:55**

**Lab Sample ID: 400-133597-4**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			02/11/17 01:02	1
Fluoride	<0.082		0.20	0.082	mg/L			02/11/17 01:02	1
Sulfate	<0.70		1.0	0.70	mg/L			02/11/17 01:02	1

### 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		02/09/17 10:32	02/10/17 12:55	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		02/09/17 10:32	02/10/17 12:55	5
Barium	<0.00049		0.0025	0.00049	mg/L		02/09/17 10:32	02/10/17 12:55	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/09/17 10:32	02/10/17 12:55	5
Boron	<0.021		0.050	0.021	mg/L		02/09/17 10:32	02/10/17 12:55	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/09/17 10:32	02/10/17 12:55	5
Calcium	<0.13		0.25	0.13	mg/L		02/09/17 10:32	02/10/17 12:55	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/09/17 10:32	02/10/17 12:55	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		02/09/17 10:32	02/10/17 12:55	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/09/17 10:32	02/10/17 12:55	5
Lithium	<0.0032		0.0050	0.0032	mg/L		02/09/17 10:32	02/10/17 12:55	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		02/09/17 10:32	02/10/17 12:55	5
Selenium	<0.00024		0.0013	0.00024	mg/L		02/09/17 10:32	02/10/17 12:55	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/09/17 10:32	02/10/17 12:55	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000096	J B	0.00020	0.000070	mg/L		02/09/17 08:55	02/10/17 14:07	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			02/09/17 13:11	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-133597-5**

**Date Collected: 02/06/17 14:05**

**Matrix: Water**

**Date Received: 02/08/17 08:55**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	33		1.0	0.89	mg/L			02/11/17 01:24	1
Fluoride	0.27		0.20	0.082	mg/L			02/11/17 01:24	1
Sulfate	180		5.0	3.5	mg/L			02/13/17 15:49	5

### 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		02/09/17 10:32	02/10/17 13:17	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		02/09/17 10:32	02/10/17 13:17	5
Barium	0.0011	J	0.0025	0.00049	mg/L		02/09/17 10:32	02/10/17 13:17	5
Beryllium	0.0017	J	0.0025	0.00034	mg/L		02/09/17 10:32	02/10/17 13:17	5
Boron	1.8		0.050	0.021	mg/L		02/09/17 10:32	02/10/17 13:17	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/09/17 10:32	02/10/17 13:17	5
Calcium	41		0.25	0.13	mg/L		02/09/17 10:32	02/10/17 13:17	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/09/17 10:32	02/10/17 13:17	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		02/09/17 10:32	02/10/17 13:17	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/09/17 10:32	02/10/17 13:17	5
Lithium	0.012		0.0050	0.0032	mg/L		02/09/17 10:32	02/10/17 13:17	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		02/09/17 10:32	02/10/17 13:17	5
Selenium	0.0033		0.0013	0.00024	mg/L		02/09/17 10:32	02/10/17 13:17	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/09/17 10:32	02/10/17 13:17	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000078	J B	0.00020	0.000070	mg/L		02/09/17 08:55	02/10/17 14:08	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	330		5.0	3.4	mg/L			02/09/17 13:11	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Lab Sample ID: 400-133597-6**

**Date Collected: 02/08/17 14:05**

**Matrix: Water**

**Date Received: 02/10/17 08:52**

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>2.5</b>		1.0	0.89	mg/L			02/15/17 06:32	1
Fluoride	<0.082		0.20	0.082	mg/L			02/15/17 06:32	1
<b>Sulfate</b>	<b>4.3</b>		1.0	0.70	mg/L			02/15/17 06:32	1

## 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		02/13/17 09:10	02/20/17 15:22	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		02/13/17 09:10	02/18/17 18:28	5
<b>Barium</b>	<b>0.037</b>		0.0025	0.00049	mg/L		02/13/17 09:10	02/18/17 18:28	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/13/17 09:10	02/18/17 18:28	5
Boron	<0.021		0.050	0.021	mg/L		02/13/17 09:10	02/18/17 18:28	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/13/17 09:10	02/18/17 18:28	5
<b>Calcium</b>	<b>3.2</b>		0.25	0.13	mg/L		02/13/17 09:10	02/20/17 15:22	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/13/17 09:10	02/18/17 18:28	5
<b>Cobalt</b>	<b>0.0051</b>		0.0025	0.00040	mg/L		02/13/17 09:10	02/18/17 18:28	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/13/17 09:10	02/18/17 18:28	5
<b>Lithium</b>	<b>0.0039</b>	<b>J</b>	0.0050	0.0032	mg/L		02/13/17 09:10	02/18/17 18:28	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		02/13/17 09:10	02/18/17 18:28	5
Selenium	<0.00024		0.0013	0.00024	mg/L		02/13/17 09:10	02/20/17 15:22	5
<b>Thallium</b>	<b>0.00011</b>	<b>J</b>	0.00050	0.000085	mg/L		02/13/17 09:10	02/18/17 18:28	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		02/13/17 09:16	02/14/17 14:11	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>54</b>		5.0	3.4	mg/L			02/12/17 13:13	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-133597-7**

**Date Collected: 02/09/17 10:55**

**Matrix: Water**

**Date Received: 02/10/17 08:52**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.5		1.0	0.89	mg/L			02/15/17 06:55	1
Fluoride	1.3		0.20	0.082	mg/L			02/15/17 06:55	1
Sulfate	60		5.0	3.5	mg/L			02/15/17 22:07	5

### 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		02/13/17 09:10	02/20/17 15:26	5
Arsenic	0.0017		0.0013	0.00046	mg/L		02/13/17 09:10	02/18/17 18:42	5
Barium	0.0015	J	0.0025	0.00049	mg/L		02/13/17 09:10	02/18/17 18:42	5
Beryllium	0.00041	J	0.0025	0.00034	mg/L		02/13/17 09:10	02/18/17 18:42	5
Boron	0.61		0.050	0.021	mg/L		02/13/17 09:10	02/18/17 18:42	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/13/17 09:10	02/18/17 18:42	5
Calcium	10		0.25	0.13	mg/L		02/13/17 09:10	02/20/17 15:26	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/13/17 09:10	02/18/17 18:42	5
Cobalt	0.00073	J	0.0025	0.00040	mg/L		02/13/17 09:10	02/18/17 18:42	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/13/17 09:10	02/18/17 18:42	5
Lithium	0.040		0.0050	0.0032	mg/L		02/13/17 09:10	02/18/17 18:42	5
Molybdenum	0.018		0.015	0.00085	mg/L		02/13/17 09:10	02/18/17 18:42	5
Selenium	0.0023		0.0013	0.00024	mg/L		02/13/17 09:10	02/20/17 15:26	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/13/17 09:10	02/18/17 18:42	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		02/13/17 09:16	02/14/17 14:12	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	180		5.0	3.4	mg/L			02/13/17 13:58	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

## Qualifiers

### HPLC/IC

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.
E	Result exceeded calibration range.
F1	MS and/or MSD Recovery is outside acceptance limits.

### Metals

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.
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.

## 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 Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

**Client Sample ID: WGWC-10**

**Date Collected: 02/06/17 12:15**

**Date Received: 02/08/17 08:55**

**Lab Sample ID: 400-133597-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	341980	02/10/17 23:08	TAJ	TAL PEN
Total Recoverable	Prep	3005A			341552	02/09/17 10:32	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	341975	02/10/17 12:41	DRE	TAL PEN
Total/NA	Prep	7470A			341560	02/09/17 08:55	JAP	TAL PEN
Total/NA	Analysis	7470A		1	341840	02/10/17 13:50	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	341571	02/09/17 13:11	RRC	TAL PEN

**Client Sample ID: FB-2**

**Date Collected: 02/06/17 12:30**

**Date Received: 02/08/17 08:55**

**Lab Sample ID: 400-133597-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	341980	02/11/17 00:16	TAJ	TAL PEN
Total Recoverable	Prep	3005A			341552	02/09/17 10:32	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	341975	02/10/17 12:46	DRE	TAL PEN
Total/NA	Prep	7470A			341560	02/09/17 08:55	JAP	TAL PEN
Total/NA	Analysis	7470A		1	341840	02/10/17 14:04	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	341571	02/09/17 13:11	RRC	TAL PEN

**Client Sample ID: WGWC-19**

**Date Collected: 02/06/17 12:40**

**Date Received: 02/08/17 08:55**

**Lab Sample ID: 400-133597-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	341980	02/11/17 00:39	TAJ	TAL PEN
Total Recoverable	Prep	3005A			341552	02/09/17 10:32	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	341975	02/10/17 12:50	DRE	TAL PEN
Total/NA	Prep	7470A			341560	02/09/17 08:55	JAP	TAL PEN
Total/NA	Analysis	7470A		1	341840	02/10/17 14:05	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	341571	02/09/17 13:11	RRC	TAL PEN

**Client Sample ID: FERB-2**

**Date Collected: 02/06/17 13:10**

**Date Received: 02/08/17 08:55**

**Lab Sample ID: 400-133597-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	341980	02/11/17 01:02	TAJ	TAL PEN
Total Recoverable	Prep	3005A			341552	02/09/17 10:32	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	341975	02/10/17 12:55	DRE	TAL PEN
Total/NA	Prep	7470A			341560	02/09/17 08:55	JAP	TAL PEN
Total/NA	Analysis	7470A		1	341840	02/10/17 14:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	341571	02/09/17 13:11	RRC	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-133597-5**

**Date Collected: 02/06/17 14:05**

**Matrix: Water**

**Date Received: 02/08/17 08:55**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	341980	02/11/17 01:24	TAJ	TAL PEN
Total/NA	Analysis	300.0		5	342081	02/13/17 15:49	KH1	TAL PEN
Total Recoverable	Prep	3005A			341552	02/09/17 10:32	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	341975	02/10/17 13:17	DRE	TAL PEN
Total/NA	Prep	7470A			341560	02/09/17 08:55	JAP	TAL PEN
Total/NA	Analysis	7470A		1	341840	02/10/17 14:08	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	341571	02/09/17 13:11	RRC	TAL PEN

**Client Sample ID: WGWC-14A**

**Lab Sample ID: 400-133597-6**

**Date Collected: 02/08/17 14:05**

**Matrix: Water**

**Date Received: 02/10/17 08:52**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	342287	02/15/17 06:32	KH1	TAL PEN
Total Recoverable	Prep	3005A			341971	02/13/17 09:10	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	342964	02/18/17 18:28	DRE	TAL PEN
Total Recoverable	Prep	3005A			341971	02/13/17 09:10	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	343047	02/20/17 15:22	DRE	TAL PEN
Total/NA	Prep	7470A			341984	02/13/17 09:16	JAP	TAL PEN
Total/NA	Analysis	7470A		1	342270	02/14/17 14:11	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	341949	02/12/17 13:13	RRC	TAL PEN

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-133597-7**

**Date Collected: 02/09/17 10:55**

**Matrix: Water**

**Date Received: 02/10/17 08:52**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	342287	02/15/17 06:55	KH1	TAL PEN
Total/NA	Analysis	300.0		5	342436	02/15/17 22:07	KH1	TAL PEN
Total Recoverable	Prep	3005A			341971	02/13/17 09:10	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	342964	02/18/17 18:42	DRE	TAL PEN
Total Recoverable	Prep	3005A			341971	02/13/17 09:10	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	343047	02/20/17 15:26	DRE	TAL PEN
Total/NA	Prep	7470A			341984	02/13/17 09:16	JAP	TAL PEN
Total/NA	Analysis	7470A		1	342270	02/14/17 14:12	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	341972	02/13/17 13:58	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 Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

## HPLC/IC

### Analysis Batch: 341980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133597-1	WGWC-10	Total/NA	Water	300.0	
400-133597-2	FB-2	Total/NA	Water	300.0	
400-133597-3	WGWC-19	Total/NA	Water	300.0	
400-133597-4	FERB-2	Total/NA	Water	300.0	
400-133597-5	WGWC-8	Total/NA	Water	300.0	
MB 400-341980/4	Method Blank	Total/NA	Water	300.0	
LCS 400-341980/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-341980/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-133738-H-1 MS	Matrix Spike	Total/NA	Water	300.0	
400-133738-H-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 342081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133597-5	WGWC-8	Total/NA	Water	300.0	
MB 400-342081/4	Method Blank	Total/NA	Water	300.0	
LCS 400-342081/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-342081/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-133618-A-5 MS	Matrix Spike	Total/NA	Water	300.0	
400-133618-A-5 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 342287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133597-6	WGWC-14A	Total/NA	Water	300.0	
400-133597-7	WGWC-9	Total/NA	Water	300.0	
MB 400-342287/36	Method Blank	Total/NA	Water	300.0	
LCS 400-342287/37	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-342287/38	Lab Control Sample Dup	Total/NA	Water	300.0	
400-133606-A-17 MS	Matrix Spike	Total/NA	Water	300.0	
400-133606-A-17 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 342436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133597-7	WGWC-9	Total/NA	Water	300.0	
MB 400-342436/4	Method Blank	Total/NA	Water	300.0	
LCS 400-342436/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-342436/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-133972-A-3 MS	Matrix Spike	Total/NA	Water	300.0	
400-133972-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

## Metals

### Prep Batch: 341552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133597-1	WGWC-10	Total Recoverable	Water	3005A	
400-133597-2	FB-2	Total Recoverable	Water	3005A	
400-133597-3	WGWC-19	Total Recoverable	Water	3005A	
400-133597-4	FERB-2	Total Recoverable	Water	3005A	
400-133597-5	WGWC-8	Total Recoverable	Water	3005A	
MB 400-341552/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-341552/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

## Metals (Continued)

### Prep Batch: 341560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133597-1	WGWC-10	Total/NA	Water	7470A	
400-133597-2	FB-2	Total/NA	Water	7470A	
400-133597-3	WGWC-19	Total/NA	Water	7470A	
400-133597-4	FERB-2	Total/NA	Water	7470A	
400-133597-5	WGWC-8	Total/NA	Water	7470A	
MB 400-341560/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-341560/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-133597-1 MS	WGWC-10	Total/NA	Water	7470A	
400-133597-1 MSD	WGWC-10	Total/NA	Water	7470A	

### Analysis Batch: 341840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133597-1	WGWC-10	Total/NA	Water	7470A	341560
400-133597-2	FB-2	Total/NA	Water	7470A	341560
400-133597-3	WGWC-19	Total/NA	Water	7470A	341560
400-133597-4	FERB-2	Total/NA	Water	7470A	341560
400-133597-5	WGWC-8	Total/NA	Water	7470A	341560
MB 400-341560/14-A	Method Blank	Total/NA	Water	7470A	341560
LCS 400-341560/15-A	Lab Control Sample	Total/NA	Water	7470A	341560
400-133597-1 MS	WGWC-10	Total/NA	Water	7470A	341560
400-133597-1 MSD	WGWC-10	Total/NA	Water	7470A	341560

### Prep Batch: 341971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133597-6	WGWC-14A	Total Recoverable	Water	3005A	
400-133597-7	WGWC-9	Total Recoverable	Water	3005A	
MB 400-341971/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-341971/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-133741-L-7-E MS ^1	Matrix Spike	Total Recoverable	Water	3005A	
400-133741-L-7-E MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-133741-L-7-F MSD ^1	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
400-133741-L-7-F MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Analysis Batch: 341975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133597-1	WGWC-10	Total Recoverable	Water	6020	341552
400-133597-2	FB-2	Total Recoverable	Water	6020	341552
400-133597-3	WGWC-19	Total Recoverable	Water	6020	341552
400-133597-4	FERB-2	Total Recoverable	Water	6020	341552
400-133597-5	WGWC-8	Total Recoverable	Water	6020	341552
MB 400-341552/1-A ^5	Method Blank	Total Recoverable	Water	6020	341552
LCS 400-341552/2-A	Lab Control Sample	Total Recoverable	Water	6020	341552

### Prep Batch: 341984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133597-6	WGWC-14A	Total/NA	Water	7470A	
400-133597-7	WGWC-9	Total/NA	Water	7470A	
MB 400-341984/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-341984/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-133768-F-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-133768-F-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

## Analysis Batch: 342270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133597-6	WGWC-14A	Total/NA	Water	7470A	341984
400-133597-7	WGWC-9	Total/NA	Water	7470A	341984
MB 400-341984/14-A	Method Blank	Total/NA	Water	7470A	341984
LCS 400-341984/15-A	Lab Control Sample	Total/NA	Water	7470A	341984
400-133768-F-1-B MS	Matrix Spike	Total/NA	Water	7470A	341984
400-133768-F-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	341984

## Analysis Batch: 342964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133597-6	WGWC-14A	Total Recoverable	Water	6020	341971
400-133597-7	WGWC-9	Total Recoverable	Water	6020	341971
MB 400-341971/1-A ^5	Method Blank	Total Recoverable	Water	6020	341971
LCS 400-341971/2-A	Lab Control Sample	Total Recoverable	Water	6020	341971
400-133741-L-7-E MS ^1	Matrix Spike	Total Recoverable	Water	6020	341971
400-133741-L-7-F MSD ^1	Matrix Spike Duplicate	Total Recoverable	Water	6020	341971

## Analysis Batch: 343047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133597-6	WGWC-14A	Total Recoverable	Water	6020	341971
400-133597-7	WGWC-9	Total Recoverable	Water	6020	341971
MB 400-341971/1-A ^5	Method Blank	Total Recoverable	Water	6020	341971
LCS 400-341971/2-A	Lab Control Sample	Total Recoverable	Water	6020	341971
400-133741-L-7-E MS ^5	Matrix Spike	Total Recoverable	Water	6020	341971
400-133741-L-7-F MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	341971

## General Chemistry

### Analysis Batch: 341571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133597-1	WGWC-10	Total/NA	Water	SM 2540C	
400-133597-2	FB-2	Total/NA	Water	SM 2540C	
400-133597-3	WGWC-19	Total/NA	Water	SM 2540C	
400-133597-4	FERB-2	Total/NA	Water	SM 2540C	
400-133597-5	WGWC-8	Total/NA	Water	SM 2540C	
MB 400-341571/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-341571/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-133597-3 DU	WGWC-19	Total/NA	Water	SM 2540C	
400-133597-5 DU	WGWC-8	Total/NA	Water	SM 2540C	

### Analysis Batch: 341949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133597-6	WGWC-14A	Total/NA	Water	SM 2540C	
MB 400-341949/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-341949/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-133606-A-15 DU	Duplicate	Total/NA	Water	SM 2540C	

### Analysis Batch: 341972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133597-7	WGWC-9	Total/NA	Water	SM 2540C	
MB 400-341972/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-341972/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-133597-7 DU	WGWC-9	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 400-341980/4**  
**Matrix: Water**  
**Analysis Batch: 341980**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			02/10/17 19:42	1
Fluoride	<0.082		0.20	0.082	mg/L			02/10/17 19:42	1
Sulfate	<0.70		1.0	0.70	mg/L			02/10/17 19:42	1

**Lab Sample ID: LCS 400-341980/5**  
**Matrix: Water**  
**Analysis Batch: 341980**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.1		mg/L		101	90 - 110
Fluoride	10.0	10.8		mg/L		108	90 - 110
Sulfate	10.0	10.5		mg/L		105	90 - 110

**Lab Sample ID: LCSD 400-341980/6**  
**Matrix: Water**  
**Analysis Batch: 341980**

**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	10.0	10.1		mg/L		101	90 - 110	0	15
Fluoride	10.0	10.7		mg/L		107	90 - 110	1	15
Sulfate	10.0	10.4		mg/L		104	90 - 110	1	15

**Lab Sample ID: 400-133738-H-1 MS**  
**Matrix: Water**  
**Analysis Batch: 341980**

**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	33		10.0	42.3		mg/L		89	80 - 120
Fluoride	0.11	J	10.0	11.3		mg/L		112	80 - 120
Sulfate	38		10.0	48.0		mg/L		96	80 - 120

**Lab Sample ID: 400-133738-H-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 341980**

**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	33		10.0	43.1		mg/L		97	80 - 120	2	20
Fluoride	0.11	J	10.0	11.5		mg/L		114	80 - 120	2	20
Sulfate	38		10.0	48.9		mg/L		104	80 - 120	2	20

**Lab Sample ID: MB 400-342081/4**  
**Matrix: Water**  
**Analysis Batch: 342081**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			02/13/17 10:32	1
Fluoride	<0.082		0.20	0.082	mg/L			02/13/17 10:32	1
Sulfate	<0.70		1.0	0.70	mg/L			02/13/17 10:32	1

TestAmerica Pensacola



# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 400-342081/5**  
**Matrix: Water**  
**Analysis Batch: 342081**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.94		mg/L		99	90 - 110
Fluoride	10.0	10.9		mg/L		109	90 - 110
Sulfate	10.0	10.2		mg/L		102	90 - 110

**Lab Sample ID: LCSD 400-342081/6**  
**Matrix: Water**  
**Analysis Batch: 342081**

**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	10.0	9.93		mg/L		99	90 - 110	0	15
Fluoride	10.0	10.9		mg/L		109	90 - 110	0	15
Sulfate	10.0	10.2		mg/L		102	90 - 110	1	15

**Lab Sample ID: 400-133618-A-5 MS**  
**Matrix: Water**  
**Analysis Batch: 342081**

**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	200		50.0	233	4	mg/L		56	80 - 120
Fluoride	<0.41		50.0	54.8		mg/L		110	80 - 120
Sulfate	130		50.0	179		mg/L		91	80 - 120

**Lab Sample ID: 400-133618-A-5 MSD**  
**Matrix: Water**  
**Analysis Batch: 342081**

**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	200		50.0	233	4	mg/L		56	80 - 120	0	20
Fluoride	<0.41		50.0	54.8		mg/L		110	80 - 120	0	20
Sulfate	130		50.0	179		mg/L		91	80 - 120	0	20

**Lab Sample ID: MB 400-342287/36**  
**Matrix: Water**  
**Analysis Batch: 342287**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			02/14/17 23:10	1
Fluoride	<0.082		0.20	0.082	mg/L			02/14/17 23:10	1
Sulfate	<0.70		1.0	0.70	mg/L			02/14/17 23:10	1

**Lab Sample ID: LCS 400-342287/37**  
**Matrix: Water**  
**Analysis Batch: 342287**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.2		mg/L		102	90 - 110
Fluoride	10.0	10.8		mg/L		108	90 - 110
Sulfate	10.0	10.6		mg/L		106	90 - 110

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCSD 400-342287/38**  
**Matrix: Water**  
**Analysis Batch: 342287**

**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	10.0	10.1		mg/L		101	90 - 110	1	15
Fluoride	10.0	10.8		mg/L		108	90 - 110	0	15
Sulfate	10.0	10.6		mg/L		106	90 - 110	0	15

**Lab Sample ID: 400-133606-A-17 MS**  
**Matrix: Water**  
**Analysis Batch: 342287**

**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	2.0		10.0	11.9		mg/L		99	80 - 120
Fluoride	<0.082		10.0	10.7		mg/L		107	80 - 120
Sulfate	<0.70		10.0	11.0		mg/L		110	80 - 120

**Lab Sample ID: 400-133606-A-17 MSD**  
**Matrix: Water**  
**Analysis Batch: 342287**

**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	2.0		10.0	11.9		mg/L		99	80 - 120	0	20
Fluoride	<0.082		10.0	10.7		mg/L		107	80 - 120	0	20
Sulfate	<0.70		10.0	10.9		mg/L		109	80 - 120	0	20

**Lab Sample ID: MB 400-342436/4**  
**Matrix: Water**  
**Analysis Batch: 342436**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			02/15/17 11:29	1
Fluoride	<0.082		0.20	0.082	mg/L			02/15/17 11:29	1
Sulfate	<0.70		1.0	0.70	mg/L			02/15/17 11:29	1

**Lab Sample ID: LCS 400-342436/5**  
**Matrix: Water**  
**Analysis Batch: 342436**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.3		mg/L		103	90 - 110
Fluoride	10.0	10.9		mg/L		109	90 - 110
Sulfate	10.0	10.7		mg/L		107	90 - 110

**Lab Sample ID: LCSD 400-342436/6**  
**Matrix: Water**  
**Analysis Batch: 342436**

**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	10.0	10.2		mg/L		102	90 - 110	1	15
Fluoride	10.0	10.9		mg/L		109	90 - 110	1	15
Sulfate	10.0	10.7		mg/L		107	90 - 110	0	15

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 400-133972-A-3 MS**

**Matrix: Water**

**Analysis Batch: 342436**

**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	<0.89	F1	10.0	302	E F1	mg/L		3019	80 - 120
Fluoride	0.10	J	10.0	11.9		mg/L		118	80 - 120
Sulfate	540	E	10.0	561	E 4	mg/L		213	80 - 120

**Lab Sample ID: 400-133972-A-3 MSD**

**Matrix: Water**

**Analysis Batch: 342436**

**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	<0.89	F1	10.0	302	E F1	mg/L		3024	80 - 120	0	20
Fluoride	0.10	J	10.0	12.0		mg/L		119	80 - 120	0	20
Sulfate	540	E	10.0	563	E 4	mg/L		239	80 - 120	0	20

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

**Lab Sample ID: MB 400-341552/1-A ^5**

**Matrix: Water**

**Analysis Batch: 341975**

**Client Sample ID: Method Blank**

**Prep Type: Total Recoverable**

**Prep Batch: 341552**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		02/09/17 10:32	02/10/17 12:32	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		02/09/17 10:32	02/10/17 12:32	5
Barium	<0.00049		0.0025	0.00049	mg/L		02/09/17 10:32	02/10/17 12:32	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/09/17 10:32	02/10/17 12:32	5
Boron	<0.021		0.050	0.021	mg/L		02/09/17 10:32	02/10/17 12:32	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/09/17 10:32	02/10/17 12:32	5
Calcium	<0.13		0.25	0.13	mg/L		02/09/17 10:32	02/10/17 12:32	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/09/17 10:32	02/10/17 12:32	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		02/09/17 10:32	02/10/17 12:32	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/09/17 10:32	02/10/17 12:32	5
Lithium	<0.0032		0.0050	0.0032	mg/L		02/09/17 10:32	02/10/17 12:32	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		02/09/17 10:32	02/10/17 12:32	5
Selenium	<0.00024		0.0013	0.00024	mg/L		02/09/17 10:32	02/10/17 12:32	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/09/17 10:32	02/10/17 12:32	5

**Lab Sample ID: LCS 400-341552/2-A**

**Matrix: Water**

**Analysis Batch: 341975**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total Recoverable**

**Prep Batch: 341552**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0526		mg/L		105	80 - 120
Arsenic	0.0500	0.0539		mg/L		108	80 - 120
Barium	0.0500	0.0533		mg/L		107	80 - 120
Beryllium	0.0500	0.0545		mg/L		109	80 - 120
Boron	0.100	0.113		mg/L		113	80 - 120
Cadmium	0.0500	0.0525		mg/L		105	80 - 120
Calcium	5.00	5.16		mg/L		103	80 - 120
Chromium	0.0500	0.0525		mg/L		105	80 - 120

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

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

**Lab Sample ID: LCS 400-341552/2-A**  
**Matrix: Water**  
**Analysis Batch: 341975**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 341552**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.0500	0.0517		mg/L		103	80 - 120
Lead	0.0500	0.0520		mg/L		104	80 - 120
Lithium	0.0500	0.0553		mg/L		111	80 - 120
Molybdenum	0.100	0.103		mg/L		103	80 - 120
Selenium	0.0500	0.0511		mg/L		102	80 - 120
Thallium	0.0100	0.0103		mg/L		103	80 - 120

**Lab Sample ID: MB 400-341971/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 342964**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 341971**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		02/13/17 09:10	02/18/17 18:24	5
Barium	<0.00049		0.0025	0.00049	mg/L		02/13/17 09:10	02/18/17 18:24	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/13/17 09:10	02/18/17 18:24	5
Boron	<0.021		0.050	0.021	mg/L		02/13/17 09:10	02/18/17 18:24	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/13/17 09:10	02/18/17 18:24	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/13/17 09:10	02/18/17 18:24	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		02/13/17 09:10	02/18/17 18:24	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/13/17 09:10	02/18/17 18:24	5
Lithium	<0.0032		0.0050	0.0032	mg/L		02/13/17 09:10	02/18/17 18:24	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		02/13/17 09:10	02/18/17 18:24	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/13/17 09:10	02/18/17 18:24	5

**Lab Sample ID: MB 400-341971/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 343047**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 341971**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		02/13/17 09:10	02/20/17 14:55	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		02/13/17 09:10	02/20/17 14:55	5
Barium	<0.00049		0.0025	0.00049	mg/L		02/13/17 09:10	02/20/17 14:55	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/13/17 09:10	02/20/17 14:55	5
Boron	<0.021		0.050	0.021	mg/L		02/13/17 09:10	02/20/17 14:55	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/13/17 09:10	02/20/17 14:55	5
Calcium	<0.13		0.25	0.13	mg/L		02/13/17 09:10	02/20/17 14:55	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/13/17 09:10	02/20/17 14:55	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		02/13/17 09:10	02/20/17 14:55	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/13/17 09:10	02/20/17 14:55	5
Lithium	<0.0032		0.0050	0.0032	mg/L		02/13/17 09:10	02/20/17 14:55	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		02/13/17 09:10	02/20/17 14:55	5
Selenium	<0.00024		0.0013	0.00024	mg/L		02/13/17 09:10	02/20/17 14:55	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/13/17 09:10	02/20/17 14:55	5

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

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

**Lab Sample ID: LCS 400-341971/2-A**  
**Matrix: Water**  
**Analysis Batch: 342964**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 341971**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.0500	0.0510		mg/L		102	80 - 120
Barium	0.0500	0.0484		mg/L		97	80 - 120
Beryllium	0.0500	0.0523		mg/L		105	80 - 120
Boron	0.100	0.0998		mg/L		100	80 - 120
Cadmium	0.0500	0.0503		mg/L		101	80 - 120
Chromium	0.0500	0.0486		mg/L		97	80 - 120
Cobalt	0.0500	0.0489		mg/L		98	80 - 120
Lead	0.0500	0.0497		mg/L		99	80 - 120
Lithium	0.0500	0.0497		mg/L		99	80 - 120
Molybdenum	0.100	0.101		mg/L		101	80 - 120
Thallium	0.0100	0.0102		mg/L		102	80 - 120

**Lab Sample ID: LCS 400-341971/2-A**  
**Matrix: Water**  
**Analysis Batch: 343047**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 341971**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0522		mg/L		104	80 - 120
Arsenic	0.0500	0.0475		mg/L		95	80 - 120
Barium	0.0500	0.0512		mg/L		102	80 - 120
Beryllium	0.0500	0.0526		mg/L		105	80 - 120
Boron	0.100	0.0978		mg/L		98	80 - 120
Cadmium	0.0500	0.0475		mg/L		95	80 - 120
Calcium	5.00	4.74		mg/L		95	80 - 120
Chromium	0.0500	0.0478		mg/L		96	80 - 120
Cobalt	0.0500	0.0466		mg/L		93	80 - 120
Lead	0.0500	0.0476		mg/L		95	80 - 120
Lithium	0.0500	0.0495		mg/L		99	80 - 120
Molybdenum	0.100	0.0941		mg/L		94	80 - 120
Selenium	0.0500	0.0484		mg/L		97	80 - 120
Thallium	0.0100	0.00987		mg/L		99	80 - 120

**Lab Sample ID: 400-133741-L-7-E MS ^1**  
**Matrix: Water**  
**Analysis Batch: 342964**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 341971**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.067		0.0500	0.124		mg/L		112	75 - 125
Beryllium	<0.000068		0.0500	0.0594		mg/L		119	75 - 125
Cadmium	<0.000068		0.0500	0.0505		mg/L		101	75 - 125
Chromium	0.00030	J	0.0500	0.0482		mg/L		96	75 - 125
Cobalt	0.00045	J	0.0500	0.0471		mg/L		93	75 - 125
Lead	0.00014	J	0.0500	0.0509		mg/L		101	75 - 125
Lithium	0.028		0.0500	0.0807		mg/L		105	75 - 125
Molybdenum	<0.00017		0.100	0.102		mg/L		102	75 - 125
Thallium	<0.000017		0.0100	0.0104		mg/L		104	75 - 125

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

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

**Lab Sample ID: 400-133741-L-7-E MS ^5**  
**Matrix: Water**  
**Analysis Batch: 343047**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 341971**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0514		mg/L		103	75 - 125
Arsenic	0.062		0.0500	0.112		mg/L		99	75 - 125
Barium	0.92		0.0500	0.989	4	mg/L		132	75 - 125
Beryllium	<0.00034		0.0500	0.0544		mg/L		109	75 - 125
Boron	0.37		0.100	0.480		mg/L		108	75 - 125
Cadmium	<0.00034		0.0500	0.0471		mg/L		94	75 - 125
Chromium	<0.0011		0.0500	0.0467		mg/L		93	75 - 125
Cobalt	0.00053	J	0.0500	0.0459		mg/L		91	75 - 125
Lead	<0.00035		0.0500	0.0485		mg/L		97	75 - 125
Lithium	0.027		0.0500	0.0759		mg/L		97	75 - 125
Molybdenum	<0.00085		0.100	0.0921		mg/L		92	75 - 125
Selenium	<0.00024		0.0500	0.0491		mg/L		98	75 - 125
Thallium	<0.00085		0.0100	0.00994		mg/L		99	75 - 125

**Lab Sample ID: 400-133741-L-7-F MSD ^1**  
**Matrix: Water**  
**Analysis Batch: 342964**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 341971**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	0.067		0.0500	0.122		mg/L		109	75 - 125	1	20
Beryllium	<0.000068		0.0500	0.0592		mg/L		118	75 - 125	0	20
Cadmium	<0.000068		0.0500	0.0506		mg/L		101	75 - 125	0	20
Chromium	0.00030	J	0.0500	0.0473		mg/L		94	75 - 125	2	20
Cobalt	0.00045	J	0.0500	0.0466		mg/L		92	75 - 125	1	20
Lead	0.00014	J	0.0500	0.0501		mg/L		100	75 - 125	2	20
Lithium	0.028		0.0500	0.0797		mg/L		103	75 - 125	1	20
Molybdenum	<0.00017		0.100	0.101		mg/L		101	75 - 125	1	20
Thallium	<0.00017		0.0100	0.0103		mg/L		103	75 - 125	1	20

**Lab Sample ID: 400-133741-L-7-F MSD ^5**  
**Matrix: Water**  
**Analysis Batch: 343047**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 341971**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0512		mg/L		102	75 - 125	0	20
Arsenic	0.062		0.0500	0.110		mg/L		97	75 - 125	1	20
Barium	0.92		0.0500	0.978	4	mg/L		111	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0531		mg/L		106	75 - 125	2	20
Boron	0.37		0.100	0.474		mg/L		102	75 - 125	1	20
Cadmium	<0.00034		0.0500	0.0476		mg/L		95	75 - 125	1	20
Chromium	<0.0011		0.0500	0.0472		mg/L		94	75 - 125	1	20
Cobalt	0.00053	J	0.0500	0.0454		mg/L		90	75 - 125	1	20
Lead	<0.00035		0.0500	0.0476		mg/L		95	75 - 125	2	20
Lithium	0.027		0.0500	0.0746		mg/L		95	75 - 125	2	20
Molybdenum	<0.00085		0.100	0.0927		mg/L		93	75 - 125	1	20
Selenium	<0.00024		0.0500	0.0479		mg/L		96	75 - 125	3	20
Thallium	<0.00085		0.0100	0.00970		mg/L		97	75 - 125	2	20

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 400-341560/14-A**  
**Matrix: Water**  
**Analysis Batch: 341840**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 341560**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0000979	J	0.00020	0.000070	mg/L		02/09/17 08:55	02/10/17 13:47	1

**Lab Sample ID: LCS 400-341560/15-A**  
**Matrix: Water**  
**Analysis Batch: 341840**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 341560**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00113		mg/L		112	80 - 120

**Lab Sample ID: 400-133597-1 MS**  
**Matrix: Water**  
**Analysis Batch: 341840**

**Client Sample ID: WGWC-10**  
**Prep Type: Total/NA**  
**Prep Batch: 341560**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	0.000083	J B	0.00201	0.00216		mg/L		103	80 - 120

**Lab Sample ID: 400-133597-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 341840**

**Client Sample ID: WGWC-10**  
**Prep Type: Total/NA**  
**Prep Batch: 341560**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.000083	J B	0.00201	0.00216		mg/L		103	80 - 120	0	20

**Lab Sample ID: MB 400-341984/14-A**  
**Matrix: Water**  
**Analysis Batch: 342270**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 341984**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		02/13/17 08:59	02/14/17 13:32	1

**Lab Sample ID: LCS 400-341984/15-A**  
**Matrix: Water**  
**Analysis Batch: 342270**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 341984**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.000995		mg/L		99	80 - 120

**Lab Sample ID: 400-133768-F-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 342270**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 341984**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00168		mg/L		84	80 - 120

**Lab Sample ID: 400-133768-F-1-C MSD**  
**Matrix: Water**  
**Analysis Batch: 342270**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 341984**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00162		mg/L		81	80 - 120	4	20

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

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

**Lab Sample ID: MB 400-341571/1**  
**Matrix: Water**  
**Analysis Batch: 341571**

**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	-		02/09/17 13:11	1

**Lab Sample ID: LCS 400-341571/2**  
**Matrix: Water**  
**Analysis Batch: 341571**

**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	288		mg/L	-	98	78 - 122

**Lab Sample ID: 400-133597-3 DU**  
**Matrix: Water**  
**Analysis Batch: 341571**

**Client Sample ID: WGWC-19**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	36		36.0		mg/L	-	0	5

**Lab Sample ID: 400-133597-5 DU**  
**Matrix: Water**  
**Analysis Batch: 341571**

**Client Sample ID: WGWC-8**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	330		334		mg/L	-	0	5

**Lab Sample ID: MB 400-341949/1**  
**Matrix: Water**  
**Analysis Batch: 341949**

**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	-		02/12/17 13:13	1

**Lab Sample ID: LCS 400-341949/2**  
**Matrix: Water**  
**Analysis Batch: 341949**

**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	282		mg/L	-	96	78 - 122

**Lab Sample ID: 400-133606-A-15 DU**  
**Matrix: Water**  
**Analysis Batch: 341949**

**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	120		122		mg/L	-	0	5



# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
SDG: Ash Pond

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

**Lab Sample ID: MB 400-341972/1**  
**Matrix: Water**  
**Analysis Batch: 341972**

**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			02/13/17 13:58	1

**Lab Sample ID: LCS 400-341972/2**  
**Matrix: Water**  
**Analysis Batch: 341972**

**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: 400-133597-7 DU**  
**Matrix: Water**  
**Analysis Batch: 341972**

**Client Sample ID: WGWC-9**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	180		182		mg/L		0	5

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

Company: Southern Company  
Address: 2411 Ralph McGill Blvd SE B10185  
City: Atlanta  
GA, 30308  
Phone: 404-506-7239  
Email: JAbraham@southernco.com  
Project Name: Plant Wansley - Ash Pond  
Site: CCR

Sampler: J. Morrison, C. Hurdle et al  
Lab PM: Whitnire, Cheyenne R  
E-Mail: cheyenne.whitnire@testamericainc.com

Due Date Requested: TAT Requested (days):  
Date Requested (days):

PO #:  
WO #:  
Project #:  
SSOW#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, T=tissue, A=air)	Analysis Requested		Special Instructions/Note:
					Field (Enter Sample ID or NO. in Sample ID)	Lab (Enter Sample ID or NO. in Sample ID)	
WGW-10	2/6/17	1215	G	W	<input checked="" type="checkbox"/>		
FB-2	2/6/17	1230	G	W	<input checked="" type="checkbox"/>		
WGW-19	2/6/17	1240	G	W	<input checked="" type="checkbox"/>		
FERB-2	2/6/17	1310	G	W	<input checked="" type="checkbox"/>		
WGW-8	2/6/17	1405	G	W	<input checked="" type="checkbox"/>		

**Possible Hazard Identification**  
 Non-Hazard  
 Flammable  
 Skin Irritant  
 Poison B  
 Unknown  
 Radiological

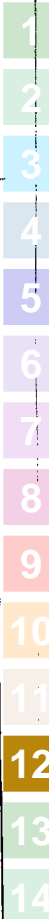
**Deliverable Requested:** I, II, III, IV, Other (specify)

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  
 Disposal By Lab  
 Archive For \_\_\_\_\_ Months

**Special Instructions/OC Requirements:**

**Empty Kit Relinquished by:** \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: 2/17/17 1320 Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: 2/17/17 1630 Company: TA  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

**Cooler Temperature(s) °C and Other Remarks:** 5.5°C



**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

Lab P/N: C. Hurdle CH, J. Morrison JM  
 Carrier Tracking No(s):  
 Lab P/N: Whitnire, Chelyenne R  
 E-Mail: chelyenne.whitnire@testamericainc.com

**Client Information**  
 Client Contact: Joju Abraham  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State/Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - AP  
 Site: CCR

Sample Identification	Due Date Requested:	TAT Requested (days):	PO #:	WO #:	Project #:	SSOV#:	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, O=oil, S=solid, G=grab)	Analysis Requested		Special Instructions/Note:
											Metalts - (Part 287 Appendix III & IV) EPA 6020 & EPA 7470	TD5 - SM 2540C; O1, F, SO4 - EPA 300	
WGWC-14A	2/8/17	14:05	G	GW			X	X	X				

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological

**Deliverable Requested:** 1, II, III, IV, Other (specify)

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date: 2/19/17 2:30  
 Relinquished by: \_\_\_\_\_ Date: 2/19/17 1600  
 Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_

**Method of Shipment:** \_\_\_\_\_  
 Received by: \_\_\_\_\_ Date/Time: 2/19/17 1400  
 Received by: \_\_\_\_\_ Date/Time: 2/19/17 0852  
 Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Cooler Temperature(s) °C and Other Remarks: 2.2°C 2/17

681-Atlanta



**Chain of Custody Record**

**TestAmerica Pensacola**  
3355 McLemore Drive  
Pensacola, FL 32514  
Phone (850) 474-1001 Fax (850) 478-2871

**Client Information**  
 Client Contact: Joju Abraham  
 Company: Southern Company  
 Address: 2411 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - AP  
 Site: CCR

Lab Pkt: Whitire, Chyenne R  
 E-Mail: cheyenne.whitire@testamericainc.com

Sampler: C. Hurdle (g), J. Montison (h)  
 Phone: \_\_\_\_\_

Carrier Tracking No(s): \_\_\_\_\_

COC No: \_\_\_\_\_  
 Page: \_\_\_\_\_  
 Job #:

Analysis Requested		Due Date Requested:	TAT Requested (days):	PO #:	WO #:	Project #:	SSOW#:	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=leach, A=air)	Special Instructions/Note:
TMS - GM 2640C ; Cl,F,SO4 - EPA 300								2/19/17	1055	G	GW	
Metals - (Part 267 Appendix III & IV) EPA 6020 & EPA 7470												
Radium 226 & 228 - SW-846 9315 & 9320												
Other: _____												

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological

Deliverable Requested: I, II, III, IV, Other (specify) \_\_\_\_\_

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_

Relinquished by: KM Date/Time: 2/17/17 1430 Company: LA M

Relinquished by: JK Date/Time: 2/17/17 1600 Company: LA M

Relinquished by: JK Date/Time: 2/17/17 1430 Company: LA M

Relinquished by: JK Date/Time: 2/17/17 1600 Company: LA M

Cooler Temperature(s) °C and Other Remarks: \_\_\_\_\_



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-133597-1

SDG Number: Ash Pond

**Login Number: 133597**

**List Number: 1**

**Creator: Siddoway, Benjamin**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.5°C IR-2, 3.2°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	

# Certification Summary

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-1  
 SDG: Ash Pond

## 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: 400-133597-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Plant Wansley

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

3/14/2017 3:01:16 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

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

### LINKS

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

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

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# Case Narrative

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-2  
SDG: Ash Pond

**Job ID: 400-133597-2**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-133597-2

#### **RAD**

Method(s) 9320: Radium-228 Prep Batch 160-293329: The method blank (MB) has radium-228 activity above the MDC and CRDL. The following associated samples are non-detect for the contaminant (activity is less than the RL), therefore, re-analysis is not required. The data have been qualified and reported. WGWC-10 (400-133597-1), FB-2 (400-133597-2), WGWC-19 (400-133597-3), FERB-2 (400-133597-4), WGWC-8 (400-133597-5), WGWC-14A (400-133597-6), WGWC-9 (400-133597-7), (LCS 160-293329/2-A), (LCSD 160-293329/3-A) and (MB 160-293329/1-A).

Method(s) PrecSep\_0: Radium-228 Prep Batch 160-293329: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: WGWC-10 (400-133597-1), FB-2 (400-133597-2), WGWC-19 (400-133597-3), FERB-2 (400-133597-4), WGWC-8 (400-133597-5), WGWC-14A (400-133597-6) and WGWC-9 (400-133597-7). 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 160-293179: Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: WGWC-10 (400-133597-1), FB-2 (400-133597-2), WGWC-19 (400-133597-3), FERB-2 (400-133597-4), WGWC-8 (400-133597-5), WGWC-14A (400-133597-6) and WGWC-9 (400-133597-7). 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 Wansley

TestAmerica Job ID: 400-133597-2  
SDG: Ash Pond

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 Wansley

TestAmerica Job ID: 400-133597-2  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-133597-1	WGWC-10	Water	02/06/17 12:15	02/08/17 08:55
400-133597-2	FB-2	Water	02/06/17 12:30	02/08/17 08:55
400-133597-3	WGWC-19	Water	02/06/17 12:40	02/08/17 08:55
400-133597-4	FERB-2	Water	02/06/17 13:10	02/08/17 08:55
400-133597-5	WGWC-8	Water	02/06/17 14:05	02/08/17 08:55
400-133597-6	WGWC-14A	Water	02/08/17 14:05	02/10/17 08:52
400-133597-7	WGWC-9	Water	02/09/17 10:55	02/10/17 08:52

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- 2
- 3
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- 10
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- 13

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-2  
SDG: Ash Pond

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-133597-1**

**Date Collected: 02/06/17 12:15**

**Matrix: Water**

**Date Received: 02/08/17 08:55**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.139		0.0832	0.0842	1.00	0.105	pCi/L	02/20/17 09:07	03/14/17 06:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					02/20/17 09:07	03/14/17 06:31	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0358	U	0.213	0.213	1.00	0.385	pCi/L	02/20/17 09:35	03/08/17 14:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					02/20/17 09:35	03/08/17 14:48	1
Y Carrier	88.6		40 - 110					02/20/17 09:35	03/08/17 14:48	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.104	U	0.229	0.229	5.00	0.385	pCi/L		03/14/17 12:39	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-2  
SDG: Ash Pond

**Client Sample ID: FB-2**  
**Date Collected: 02/06/17 12:30**  
**Date Received: 02/08/17 08:55**

**Lab Sample ID: 400-133597-2**  
**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	0.0497	U	0.0778	0.0779	1.00	0.134	pCi/L	02/20/17 09:07	03/14/17 06:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					02/20/17 09:07	03/14/17 06:32	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.745		0.279	0.287	1.00	0.388	pCi/L	02/20/17 09:35	03/08/17 14:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					02/20/17 09:35	03/08/17 14:48	1
Y Carrier	82.6		40 - 110					02/20/17 09:35	03/08/17 14:48	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.795		0.290	0.298	5.00	0.388	pCi/L		03/14/17 12:39	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-2  
SDG: Ash Pond

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-133597-3**

**Date Collected: 02/06/17 12:40**

**Matrix: Water**

**Date Received: 02/08/17 08:55**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0683	U	0.0740	0.0743	1.00	0.119	pCi/L	02/20/17 09:07	03/14/17 06:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					02/20/17 09:07	03/14/17 06:32	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.403		0.227	0.230	1.00	0.340	pCi/L	02/20/17 09:35	03/08/17 14:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					02/20/17 09:35	03/08/17 14:48	1
Y Carrier	87.9		40 - 110					02/20/17 09:35	03/08/17 14:48	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.471		0.238	0.241	5.00	0.340	pCi/L		03/14/17 12:39	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-2  
SDG: Ash Pond

**Client Sample ID: FERB-2**  
**Date Collected: 02/06/17 13:10**  
**Date Received: 02/08/17 08:55**

**Lab Sample ID: 400-133597-4**  
**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	-0.0296	U	0.0485	0.0486	1.00	0.119	pCi/L	02/20/17 09:07	03/14/17 06:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					02/20/17 09:07	03/14/17 06:32	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.153	U	0.212	0.212	1.00	0.354	pCi/L	02/20/17 09:35	03/08/17 14:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					02/20/17 09:35	03/08/17 14:48	1
Y Carrier	86.7		40 - 110					02/20/17 09:35	03/08/17 14:48	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.124	U	0.217	0.218	5.00	0.354	pCi/L		03/14/17 12:39	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-2  
SDG: Ash Pond

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-133597-5**

**Date Collected: 02/06/17 14:05**

**Matrix: Water**

**Date Received: 02/08/17 08:55**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.298		0.112	0.115	1.00	0.114	pCi/L	02/20/17 09:07	03/14/17 06:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					02/20/17 09:07	03/14/17 06:32	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.750		0.253	0.263	1.00	0.333	pCi/L	02/20/17 09:35	03/08/17 14:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					02/20/17 09:35	03/08/17 14:48	1
Y Carrier	86.4		40 - 110					02/20/17 09:35	03/08/17 14:48	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.05		0.277	0.287	5.00	0.333	pCi/L		03/14/17 12:39	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-2  
SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Lab Sample ID: 400-133597-6**

Date Collected: 02/08/17 14:05

Matrix: Water

Date Received: 02/10/17 08:52

### 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		0.0997	0.102	1.00	0.114	pCi/L	02/20/17 09:07	03/14/17 06:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					02/20/17 09:07	03/14/17 06:32	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.743		0.272	0.281	1.00	0.375	pCi/L	02/20/17 09:35	03/08/17 14:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					02/20/17 09:35	03/08/17 14:49	1
Y Carrier	85.6		40 - 110					02/20/17 09:35	03/08/17 14:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.958		0.290	0.298	5.00	0.375	pCi/L		03/14/17 12:39	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-2  
SDG: Ash Pond

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-133597-7**

**Date Collected: 02/09/17 10:55**

**Matrix: Water**

**Date Received: 02/10/17 08:52**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.161		0.0910	0.0921	1.00	0.113	pCi/L	02/20/17 09:07	03/14/17 06:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					02/20/17 09:07	03/14/17 06:32	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.232	U	0.229	0.230	1.00	0.371	pCi/L	02/20/17 09:35	03/08/17 14:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					02/20/17 09:35	03/08/17 14:49	1
Y Carrier	84.1		40 - 110					02/20/17 09:35	03/08/17 14:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.393		0.246	0.248	5.00	0.371	pCi/L		03/14/17 12:39	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-2  
SDG: Ash Pond

## 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 Wansley

TestAmerica Job ID: 400-133597-2  
SDG: Ash Pond

**Client Sample ID: WGWC-10**

**Date Collected: 02/06/17 12:15**

**Date Received: 02/08/17 08:55**

**Lab Sample ID: 400-133597-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293179	02/20/17 09:07	MBC	TAL SL
Total/NA	Analysis	9315		1	297617	03/14/17 06:31	KLS	TAL SL
Total/NA	Prep	PrecSep_0			293329	02/20/17 09:35	BME	TAL SL
Total/NA	Analysis	9320		1	296604	03/08/17 14:48	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297652	03/14/17 12:39	RTM	TAL SL

**Client Sample ID: FB-2**

**Date Collected: 02/06/17 12:30**

**Date Received: 02/08/17 08:55**

**Lab Sample ID: 400-133597-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293179	02/20/17 09:07	MBC	TAL SL
Total/NA	Analysis	9315		1	297617	03/14/17 06:32	KLS	TAL SL
Total/NA	Prep	PrecSep_0			293329	02/20/17 09:35	BME	TAL SL
Total/NA	Analysis	9320		1	296604	03/08/17 14:48	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297652	03/14/17 12:39	RTM	TAL SL

**Client Sample ID: WGWC-19**

**Date Collected: 02/06/17 12:40**

**Date Received: 02/08/17 08:55**

**Lab Sample ID: 400-133597-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293179	02/20/17 09:07	MBC	TAL SL
Total/NA	Analysis	9315		1	297617	03/14/17 06:32	KLS	TAL SL
Total/NA	Prep	PrecSep_0			293329	02/20/17 09:35	BME	TAL SL
Total/NA	Analysis	9320		1	296604	03/08/17 14:48	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297652	03/14/17 12:39	RTM	TAL SL

**Client Sample ID: FERB-2**

**Date Collected: 02/06/17 13:10**

**Date Received: 02/08/17 08:55**

**Lab Sample ID: 400-133597-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293179	02/20/17 09:07	MBC	TAL SL
Total/NA	Analysis	9315		1	297617	03/14/17 06:32	KLS	TAL SL
Total/NA	Prep	PrecSep_0			293329	02/20/17 09:35	BME	TAL SL
Total/NA	Analysis	9320		1	296604	03/08/17 14:48	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297652	03/14/17 12:39	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-2  
SDG: Ash Pond

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-133597-5**

**Date Collected: 02/06/17 14:05**

**Matrix: Water**

**Date Received: 02/08/17 08:55**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293179	02/20/17 09:07	MBC	TAL SL
Total/NA	Analysis	9315		1	297617	03/14/17 06:32	KLS	TAL SL
Total/NA	Prep	PrecSep_0			293329	02/20/17 09:35	BME	TAL SL
Total/NA	Analysis	9320		1	296604	03/08/17 14:48	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297652	03/14/17 12:39	RTM	TAL SL

**Client Sample ID: WGWC-14A**

**Lab Sample ID: 400-133597-6**

**Date Collected: 02/08/17 14:05**

**Matrix: Water**

**Date Received: 02/10/17 08:52**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293179	02/20/17 09:07	MBC	TAL SL
Total/NA	Analysis	9315		1	297617	03/14/17 06:32	KLS	TAL SL
Total/NA	Prep	PrecSep_0			293329	02/20/17 09:35	BME	TAL SL
Total/NA	Analysis	9320		1	296549	03/08/17 14:49	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297652	03/14/17 12:39	RTM	TAL SL

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-133597-7**

**Date Collected: 02/09/17 10:55**

**Matrix: Water**

**Date Received: 02/10/17 08:52**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			293179	02/20/17 09:07	MBC	TAL SL
Total/NA	Analysis	9315		1	297617	03/14/17 06:32	KLS	TAL SL
Total/NA	Prep	PrecSep_0			293329	02/20/17 09:35	BME	TAL SL
Total/NA	Analysis	9320		1	296549	03/08/17 14:49	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	297652	03/14/17 12:39	RTM	TAL SL

## Laboratory References:

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

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-2  
SDG: Ash Pond

## Rad

### Prep Batch: 293179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133597-1	WGWC-10	Total/NA	Water	PrecSep-21	
400-133597-2	FB-2	Total/NA	Water	PrecSep-21	
400-133597-3	WGWC-19	Total/NA	Water	PrecSep-21	
400-133597-4	FERB-2	Total/NA	Water	PrecSep-21	
400-133597-5	WGWC-8	Total/NA	Water	PrecSep-21	
400-133597-6	WGWC-14A	Total/NA	Water	PrecSep-21	
400-133597-7	WGWC-9	Total/NA	Water	PrecSep-21	
MB 160-293179/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-293179/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-293179/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 293329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-133597-1	WGWC-10	Total/NA	Water	PrecSep_0	
400-133597-2	FB-2	Total/NA	Water	PrecSep_0	
400-133597-3	WGWC-19	Total/NA	Water	PrecSep_0	
400-133597-4	FERB-2	Total/NA	Water	PrecSep_0	
400-133597-5	WGWC-8	Total/NA	Water	PrecSep_0	
400-133597-6	WGWC-14A	Total/NA	Water	PrecSep_0	
400-133597-7	WGWC-9	Total/NA	Water	PrecSep_0	
MB 160-293329/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-293329/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-293329/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-2  
SDG: Ash Pond

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

**Lab Sample ID: MB 160-293179/1-A**  
**Matrix: Water**  
**Analysis Batch: 297617**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 293179**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03678	U	0.0950	0.0951	1.00	0.173	pCi/L	02/20/17 09:07	03/14/17 06:28	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					02/20/17 09:07	03/14/17 06:28	1

**Lab Sample ID: LCS 160-293179/2-A**  
**Matrix: Water**  
**Analysis Batch: 297617**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 293179**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	15.2	14.42		1.53	1.00	0.174	pCi/L	95	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	96.2		40 - 110						

**Lab Sample ID: LCSD 160-293179/3-A**  
**Matrix: Water**  
**Analysis Batch: 297617**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 293179**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	15.2	15.30		1.61	1.00	0.174	pCi/L	101	68 - 137	0.28	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	98.5		40 - 110								

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

**Lab Sample ID: MB 160-293329/1-A**  
**Matrix: Water**  
**Analysis Batch: 296604**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 293329**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.523		0.392	0.416	1.00	0.487	pCi/L	02/20/17 09:35	03/08/17 14:46	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					02/20/17 09:35	03/08/17 14:46	1
Y Carrier	84.9		40 - 110					02/20/17 09:35	03/08/17 14:46	1

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-2  
SDG: Ash Pond

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

**Lab Sample ID: LCS 160-293329/2-A**  
**Matrix: Water**  
**Analysis Batch: 296604**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 293329**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	18.3	18.48		1.99	1.00	0.476	pCi/L	101	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	96.2		40 - 110
Y Carrier	89.7		40 - 110

**Lab Sample ID: LCSD 160-293329/3-A**  
**Matrix: Water**  
**Analysis Batch: 296604**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 293329**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	18.3	19.42		2.08	1.00	0.464	pCi/L	106	56 - 140	0.23	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	98.5		40 - 110
Y Carrier	86.4		40 - 110

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

**Lab Sample ID: 400-133561-A-16 DU**  
**Matrix: Water**  
**Analysis Batch: 297652**

**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	1.11		1.007		0.378	5.00	0.501	pCi/L	0.13	



**Chain of Custody Record**

TestAmerica Pensacola  
3355 McLemore Drive  
Pensacola, FL 32514  
Phone (850) 474-1001 Fax (850) 478-2871

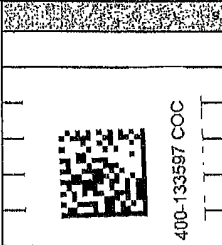
**Client Information**  
 Company: Southern Company  
 Address: 2411 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

Sampler: J. Morrison, C. Hurdle et al  
 Lab PM: Whitnire, Cheyenne R  
 E-Mail: cheyenne.whitnire@testamericainc.com

Camera Tracking No(s):  
 Page:  
 Job #:

Due Date Requested:  
 TAT Requested (days):  
 PO #:  
 WO #:  
 Project #:  
 SSOW#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, T=tissue, A=air)	Analysis Requested	Special Instructions/Note:
WGW-10	2/6/17	1215	G	W	TDS - SM 2640C ; Cl, F, SO4 - EPA 300 Metals - (Part 267 Appendix III & IV) EPA 6020 & EPA 7470 Radium 226 & 228 - SW-846 9316 & 9320	
FB-2	2/6/17	1230	G	W		
WGW-19	2/6/17	1240	G	W		
FERB-2	2/6/17	1310	G	W		
WGW-8	2/6/17	1405	G	W		



Preservation Codes:  
 A - HCL  
 B - NaOH  
 C - Zn Acetate  
 D - Nitric Acid  
 E - MeOH  
 F - MeOH  
 G - Amchlor  
 H - Ascorbic Acid  
 I - Ice  
 J - DI Water  
 K - EDTA  
 L - EDA  
 Other:  
 M - Hexane  
 N - None  
 O - AsHClO2  
 P - NiSO4S  
 Q - NiSO4S  
 R - NiSO4S  
 S - H2SO4  
 T - TSP Dodecahydrate  
 U - Acetone  
 V - MCAA  
 W - ph 4-5  
 Z - other (specify)

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

**Special Instructions/OC Requirements:**

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: 2/17/17 1320 Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: 2/17/17 1630 Company: TA  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Cooler Temperature(s) °C and Other Remarks: 5.5°C

681-Atlanta



**Chain of Custody Record**

**TestAmerica Pensacola**  
3355 McLemore Drive  
Pensacola, FL 32514  
Phone (850) 474-1001 Fax (850) 478-2871

**Client Information**  
 Client Contact: Joju Abraham  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State: GA, Zip: 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southern.com  
 Project Name: Plant Wansley - AP  
 Site: CCR

Lab P/N: Whitmire, Cheyenne R  
 E-Mail: cheyenne.whitmire@testamerica.com

Carrier Tracking No(s):  
 Due Date Requested:  
 TAT Requested (days):

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, A=air)	Analysis Requested	Preservation Codes:	Special Instructions/Note:
WGWC-14A	2/8/17	14:05	G	GW	TDS - SM 2540C; Cl <sub>2</sub> F <sub>5</sub> SO <sub>4</sub> - EPA 300 Metals - (Part 287 Appendix III & IV) EPA 6020 & EPA 7470 Madium 228 & 220 - SW-846 9316 & 9320	A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO <sub>4</sub> F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 L - EDA	

**Possible Hazard Identification**  
 Non-Hazard  
 Flammable  
 Skin Irritant  
 Poison B  
 Unknown  
 Radiological

**Deliverable Requested:** I, II, III, IV, Other (specify)

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  
 Disposal By Lab  
 Months: \_\_\_\_\_

**Empty Kit Relinquished by:** \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

**Relinquished by:** [Signature] Date: 2/9/17 Time: 14:30 Company: [Signature]  
**Relinquished by:** [Signature] Date: 2/9/17 Time: 16:00 Company: [Signature]  
**Relinquished by:** [Signature] Date: 2/9/17 Time: 08:52 Company: [Signature]

**Custody Seals Intact:** Δ Yes Δ No  
 Custody Seal No.: \_\_\_\_\_  
 Cooler Temperature(s) °C and Other Remarks: 2.2°C [Signature]

**Chain of Custody Record**

**TestAmerica Pensacola**  
3355 McLemore Drive  
Pensacola, FL 32514  
Phone (850) 474-1001 Fax (850) 478-2871

**Client Information**

Client Contact:  
Joju Abraham

Company:  
Southern Company

Address:  
2411 Ralph McGill Blvd SE B10185

City:  
Atlanta

State, Zip:  
GA, 30308

Phone:  
404-506-7239

Email:  
JAbraham@southernco.com

Project Name:  
Plant Wansley - AP

Site:  
CCR

Carrier Tracking No(s):

Lab Pkt:  
Whitnire, Chyenne R

E-Mail:  
cheyenne.whitnire@testamericainc.com

Sampler:  
C. Hurdle et, J. Montison #4

Phone:

**Analysis Requested**

Due Date Requested:

TAT Requested (days):

PO #:

WO #:

Project #:

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 - AsNaO2**  
**P - Na2O4S**  
**Q - Na2SO3**  
**R - Na2SO3**  
**S - H2SO4**  
**T - TSP Dodecahydrate**  
**U - Acetone**  
**V - MCAA**  
**W - ph 4-5**  
**Z - other (specify)**

**Analysis Requested**

Analysis Requested	Container Number (if applicable)	Special Instructions/Note:
TTS - GM 2640C; Cl,F,SO4 - EPA 300		
Metals - (Part 267 Appendix III & IV) EPA 6020 & EPA 7470		
Radium 226 & 228 - SW-846 9315 & 9320		

**Sample Identification**

WGWWC-9

Sample Date

2/19/17

Sample Time

10:55

Sample Type

G

Matrix

GW

Preservation Code

**Possible Hazard Identification**

Non-Hazard

Flammable

Skin Irritant

Poison B

Unknown

Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**

Return To Client

Disposal By Lab

Archive For

Months

**Special Instructions/QC Requirements:**

Time:

Date:

Relinquished by:

Company:

Date/Time:

Company:

Company:

Received by:

Date/Time:

Date/Time:

Date/Time:

Company:

Relinquished by:

Company:

Date/Time:

Company:

Company:

Received by:

Date/Time:

Date/Time:

Date/Time:

Company:

Custody Seal No.:

Δ Yes Δ No

Cooler Temperature(s) °C and Other Remarks:

3.2°C



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-133597-2

SDG Number: Ash Pond

**Login Number: 133597**

**List Number: 1**

**Creator: Siddoway, Benjamin**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.5°C IR-2, 3.2°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	

# Certification Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-2  
SDG: Ash Pond

## Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP Secondary AB	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

## Laboratory: TestAmerica St. Louis

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-17
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-17 *
Florida	NELAP	4	E87689	06-30-17
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17
Nevada	State Program	9	MO000542017-1	07-31-17
New Jersey	NELAP	2	MO002	06-30-17
New York	NELAP	2	11616	03-31-17 *

\* Certification renewal pending - certification considered valid.

# Certification Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-133597-2  
SDG: Ash Pond

## Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
North Dakota	State Program	8	R207	06-30-17
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-18
South Carolina	State Program	4	85002001	06-30-17
Texas	NELAP	6	T104704193-16-10	07-31-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-17
Virginia	NELAP	3	460230	06-14-17
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-17 *

\* Certification renewal pending - certification considered valid.

# TestAmerica

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: 400-134445-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Plant Wansley

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

3/6/2017 4:58:38 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

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

### LINKS

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

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

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# Case Narrative

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-1  
SDG: Ash Pond

**Job ID: 400-134445-1**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-134445-1

#### Metals

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 343709 and analytical batch 344314 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 laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 343709 and analytical batch 344314 recovered outside control limits for the following analytes: Antimony. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 6020: The continuing calibration verification (CCV) associated with batch 344380 recovered above the upper control limit for Antimony. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: WGWC-14A (400-134445-2), FERB-1 (400-134445-3) and DUP-1 (400-134445-4).

Method(s) 6020: The laboratory control sample (LCS) for preparation batch 343709 and analytical batch 344380 recovered outside control limits for the following analytes: Antimony. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 7470A: The method blank for prep batch 343903 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.



# Detection Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-1  
SDG: Ash Pond

## Client Sample ID: FB-1

## Lab Sample ID: 400-134445-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.00051	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0033	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00061	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable

## Client Sample ID: WGWC-14A

## Lab Sample ID: 400-134445-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.3		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	16		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.051		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	4.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.014		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Thallium	0.00012	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	78		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FERB-1

## Lab Sample ID: 400-134445-3

No Detections.

## Client Sample ID: DUP-1

## Lab Sample ID: 400-134445-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.4		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	17		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.051		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	4.3		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.014		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Thallium	0.00013	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	92		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Method Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-1  
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN

#### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 Wansley

TestAmerica Job ID: 400-134445-1  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-134445-1	FB-1	Water	02/23/17 11:15	02/24/17 16:23
400-134445-2	WGWC-14A	Water	02/23/17 11:30	02/24/17 16:23
400-134445-3	FERB-1	Water	02/23/17 11:45	02/24/17 16:23
400-134445-4	DUP-1	Water	02/23/17 00:00	02/24/17 16:23

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# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-1  
SDG: Ash Pond

**Client Sample ID: FB-1**  
**Date Collected: 02/23/17 11:15**  
**Date Received: 02/24/17 16:23**

**Lab Sample ID: 400-134445-1**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			02/28/17 02:37	1
Fluoride	<0.082		0.20	0.082	mg/L			02/28/17 02:37	1
Sulfate	<0.70		1.0	0.70	mg/L			02/28/17 02:37	1

### 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		02/27/17 09:15	03/02/17 15:18	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		02/27/17 09:15	03/02/17 15:18	5
Barium	<0.00049		0.0025	0.00049	mg/L		02/27/17 09:15	03/02/17 15:18	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/27/17 09:15	03/02/17 15:18	5
Boron	<0.021		0.050	0.021	mg/L		02/27/17 09:15	03/02/17 15:18	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/27/17 09:15	03/02/17 15:18	5
Calcium	<0.13		0.25	0.13	mg/L		02/27/17 09:15	03/02/17 15:18	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/27/17 09:15	03/02/17 15:18	5
<b>Cobalt</b>	<b>0.00051</b>	<b>J</b>	0.0025	0.00040	mg/L		02/27/17 09:15	03/02/17 15:18	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/27/17 09:15	03/02/17 15:18	5
Lithium	<0.0032		0.0050	0.0032	mg/L		02/27/17 09:15	03/02/17 15:18	5
<b>Molybdenum</b>	<b>0.0033</b>	<b>J</b>	0.015	0.00085	mg/L		02/27/17 09:15	03/02/17 15:18	5
<b>Selenium</b>	<b>0.00061</b>	<b>J</b>	0.0013	0.00024	mg/L		02/27/17 09:15	03/02/17 15:18	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/27/17 09:15	03/02/17 15:18	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		02/28/17 09:39	03/01/17 13:04	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			03/01/17 15:35	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-1  
SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Lab Sample ID: 400-134445-2**

Date Collected: 02/23/17 11:30

Matrix: Water

Date Received: 02/24/17 16:23

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>4.3</b>		1.0	0.89	mg/L			02/28/17 03:00	1
Fluoride	<0.082		0.20	0.082	mg/L			02/28/17 03:00	1
<b>Sulfate</b>	<b>16</b>		1.0	0.70	mg/L			02/28/17 03:00	1

### 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		02/27/17 09:15	03/02/17 19:45	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		02/27/17 09:15	03/02/17 19:45	5
<b>Barium</b>	<b>0.051</b>		0.0025	0.00049	mg/L		02/27/17 09:15	03/02/17 19:45	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/27/17 09:15	03/02/17 19:45	5
Boron	<0.021		0.050	0.021	mg/L		02/27/17 09:15	03/02/17 19:45	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/27/17 09:15	03/02/17 19:45	5
<b>Calcium</b>	<b>4.1</b>		0.25	0.13	mg/L		02/27/17 09:15	03/02/17 19:45	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/27/17 09:15	03/02/17 19:45	5
<b>Cobalt</b>	<b>0.014</b>		0.0025	0.00040	mg/L		02/27/17 09:15	03/02/17 19:45	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/27/17 09:15	03/02/17 19:45	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		02/27/17 09:15	03/02/17 19:45	5
Selenium	<0.00024		0.0013	0.00024	mg/L		02/27/17 09:15	03/02/17 19:45	5
<b>Thallium</b>	<b>0.00012</b>	<b>J</b>	0.00050	0.000085	mg/L		02/27/17 09:15	03/02/17 19:45	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0032		0.0050	0.0032	mg/L		02/27/17 09:15	03/03/17 13:09	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		02/28/17 09:39	03/01/17 13:10	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>78</b>		5.0	3.4	mg/L			03/01/17 15:35	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-1  
SDG: Ash Pond

**Client Sample ID: FERB-1**

**Date Collected: 02/23/17 11:45**

**Date Received: 02/24/17 16:23**

**Lab Sample ID: 400-134445-3**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			02/28/17 03:22	1
Fluoride	<0.082		0.20	0.082	mg/L			02/28/17 03:22	1
Sulfate	<0.70		1.0	0.70	mg/L			02/28/17 03:22	1

### 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		02/27/17 09:15	03/02/17 19:49	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		02/27/17 09:15	03/02/17 19:49	5
Barium	<0.00049		0.0025	0.00049	mg/L		02/27/17 09:15	03/02/17 19:49	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/27/17 09:15	03/02/17 19:49	5
Boron	<0.021		0.050	0.021	mg/L		02/27/17 09:15	03/02/17 19:49	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/27/17 09:15	03/02/17 19:49	5
Calcium	<0.13		0.25	0.13	mg/L		02/27/17 09:15	03/02/17 19:49	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/27/17 09:15	03/02/17 19:49	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		02/27/17 09:15	03/02/17 19:49	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/27/17 09:15	03/02/17 19:49	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		02/27/17 09:15	03/02/17 19:49	5
Selenium	<0.00024		0.0013	0.00024	mg/L		02/27/17 09:15	03/02/17 19:49	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/27/17 09:15	03/02/17 19:49	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0032		0.0050	0.0032	mg/L		02/27/17 09:15	03/03/17 13:13	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		02/28/17 09:39	03/01/17 13:11	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			03/01/17 15:35	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-1  
SDG: Ash Pond

**Client Sample ID: DUP-1**  
**Date Collected: 02/23/17 00:00**  
**Date Received: 02/24/17 16:23**

**Lab Sample ID: 400-134445-4**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>4.4</b>		1.0	0.89	mg/L			02/28/17 03:45	1
Fluoride	<0.082		0.20	0.082	mg/L			02/28/17 03:45	1
<b>Sulfate</b>	<b>17</b>		1.0	0.70	mg/L			02/28/17 03:45	1

### 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		02/27/17 09:15	03/02/17 19:54	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		02/27/17 09:15	03/02/17 19:54	5
<b>Barium</b>	<b>0.051</b>		0.0025	0.00049	mg/L		02/27/17 09:15	03/02/17 19:54	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/27/17 09:15	03/02/17 19:54	5
Boron	<0.021		0.050	0.021	mg/L		02/27/17 09:15	03/02/17 19:54	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/27/17 09:15	03/02/17 19:54	5
<b>Calcium</b>	<b>4.3</b>		0.25	0.13	mg/L		02/27/17 09:15	03/02/17 19:54	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/27/17 09:15	03/02/17 19:54	5
<b>Cobalt</b>	<b>0.014</b>		0.0025	0.00040	mg/L		02/27/17 09:15	03/02/17 19:54	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/27/17 09:15	03/02/17 19:54	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		02/27/17 09:15	03/02/17 19:54	5
Selenium	<0.00024		0.0013	0.00024	mg/L		02/27/17 09:15	03/02/17 19:54	5
<b>Thallium</b>	<b>0.00013</b>	<b>J</b>	0.00050	0.000085	mg/L		02/27/17 09:15	03/02/17 19:54	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0032		0.0050	0.0032	mg/L		02/27/17 09:15	03/03/17 13:18	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		02/28/17 09:39	03/01/17 13:13	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>92</b>		5.0	3.4	mg/L			02/26/17 15:06	1



# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-1  
SDG: Ash Pond

## Qualifiers

### Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
*	LCS or LCSD 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.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

## Glossary

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

TestAmerica Job ID: 400-134445-1  
SDG: Ash Pond

**Client Sample ID: FB-1**  
**Date Collected: 02/23/17 11:15**  
**Date Received: 02/24/17 16:23**

**Lab Sample ID: 400-134445-1**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	343809	02/28/17 02:37	KH1	TAL PEN
Total Recoverable	Prep	3005A			343709	02/27/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344314	03/02/17 15:18	DRE	TAL PEN
Total/NA	Prep	7470A			343903	02/28/17 09:39	JAP	TAL PEN
Total/NA	Analysis	7470A		1	344162	03/01/17 13:04	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344158	03/01/17 15:35	TET	TAL PEN

**Client Sample ID: WGWC-14A**  
**Date Collected: 02/23/17 11:30**  
**Date Received: 02/24/17 16:23**

**Lab Sample ID: 400-134445-2**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	343809	02/28/17 03:00	KH1	TAL PEN
Total Recoverable	Prep	3005A			343709	02/27/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344380	03/02/17 19:45	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		343709	02/27/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	344584	03/03/17 13:09	DRE	TAL PEN
Total/NA	Prep	7470A			343903	02/28/17 09:39	JAP	TAL PEN
Total/NA	Analysis	7470A		1	344162	03/01/17 13:10	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344158	03/01/17 15:35	TET	TAL PEN

**Client Sample ID: FERB-1**  
**Date Collected: 02/23/17 11:45**  
**Date Received: 02/24/17 16:23**

**Lab Sample ID: 400-134445-3**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	343809	02/28/17 03:22	KH1	TAL PEN
Total Recoverable	Prep	3005A			343709	02/27/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	344380	03/02/17 19:49	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		343709	02/27/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	344584	03/03/17 13:13	DRE	TAL PEN
Total/NA	Prep	7470A			343903	02/28/17 09:39	JAP	TAL PEN
Total/NA	Analysis	7470A		1	344162	03/01/17 13:11	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344158	03/01/17 15:35	TET	TAL PEN

**Client Sample ID: DUP-1**  
**Date Collected: 02/23/17 00:00**  
**Date Received: 02/24/17 16:23**

**Lab Sample ID: 400-134445-4**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	343809	02/28/17 03:45	KH1	TAL PEN
Total Recoverable	Prep	3005A			343709	02/27/17 09:15	RJB	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-1  
SDG: Ash Pond

**Client Sample ID: DUP-1**

**Date Collected: 02/23/17 00:00**

**Date Received: 02/24/17 16:23**

**Lab Sample ID: 400-134445-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020		5	344380	03/02/17 19:54	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		343709	02/27/17 09:15	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	344584	03/03/17 13:18	DRE	TAL PEN
Total/NA	Prep	7470A			343903	02/28/17 09:39	JAP	TAL PEN
Total/NA	Analysis	7470A		1	344162	03/01/17 13:13	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	343672	02/26/17 15:06	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 Wansley

TestAmerica Job ID: 400-134445-1  
SDG: Ash Pond

## HPLC/IC

### Analysis Batch: 343809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134445-1	FB-1	Total/NA	Water	300.0	
400-134445-2	WGWC-14A	Total/NA	Water	300.0	
400-134445-3	FERB-1	Total/NA	Water	300.0	
400-134445-4	DUP-1	Total/NA	Water	300.0	
MB 400-343809/31	Method Blank	Total/NA	Water	300.0	
LCS 400-343809/32	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-343809/33	Lab Control Sample Dup	Total/NA	Water	300.0	
400-134170-D-2 MS	Matrix Spike	Total/NA	Water	300.0	
400-134170-D-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

## Metals

### Prep Batch: 343709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134445-1	FB-1	Total Recoverable	Water	3005A	
400-134445-2	WGWC-14A	Total Recoverable	Water	3005A	
400-134445-2 - RA	WGWC-14A	Total Recoverable	Water	3005A	
400-134445-3 - RA	FERB-1	Total Recoverable	Water	3005A	
400-134445-3	FERB-1	Total Recoverable	Water	3005A	
400-134445-4 - RA	DUP-1	Total Recoverable	Water	3005A	
400-134445-4	DUP-1	Total Recoverable	Water	3005A	
MB 400-343709/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-343709/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-134364-I-1-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-134364-I-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Prep Batch: 343903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134445-1	FB-1	Total/NA	Water	7470A	
400-134445-2	WGWC-14A	Total/NA	Water	7470A	
400-134445-3	FERB-1	Total/NA	Water	7470A	
400-134445-4	DUP-1	Total/NA	Water	7470A	
MB 400-343903/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-343903/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-134445-1 MS	FB-1	Total/NA	Water	7470A	
400-134445-1 MSD	FB-1	Total/NA	Water	7470A	

### Analysis Batch: 344162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134445-1	FB-1	Total/NA	Water	7470A	343903
400-134445-2	WGWC-14A	Total/NA	Water	7470A	343903
400-134445-3	FERB-1	Total/NA	Water	7470A	343903
400-134445-4	DUP-1	Total/NA	Water	7470A	343903
MB 400-343903/14-A	Method Blank	Total/NA	Water	7470A	343903
LCS 400-343903/15-A	Lab Control Sample	Total/NA	Water	7470A	343903
400-134445-1 MS	FB-1	Total/NA	Water	7470A	343903
400-134445-1 MSD	FB-1	Total/NA	Water	7470A	343903

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-1  
SDG: Ash Pond

## Metals (Continued)

### Analysis Batch: 344314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134445-1	FB-1	Total Recoverable	Water	6020	343709
MB 400-343709/1-A ^5	Method Blank	Total Recoverable	Water	6020	343709
LCS 400-343709/2-A	Lab Control Sample	Total Recoverable	Water	6020	343709
400-134364-I-1-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	343709
400-134364-I-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	343709

### Analysis Batch: 344380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134445-2	WGWC-14A	Total Recoverable	Water	6020	343709
400-134445-3	FERB-1	Total Recoverable	Water	6020	343709
400-134445-4	DUP-1	Total Recoverable	Water	6020	343709

### Analysis Batch: 344584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134445-2 - RA	WGWC-14A	Total Recoverable	Water	6020	343709
400-134445-3 - RA	FERB-1	Total Recoverable	Water	6020	343709
400-134445-4 - RA	DUP-1	Total Recoverable	Water	6020	343709
MB 400-343709/1-A ^5	Method Blank	Total Recoverable	Water	6020	343709
LCS 400-343709/2-A	Lab Control Sample	Total Recoverable	Water	6020	343709

## General Chemistry

### Analysis Batch: 343672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134445-4	DUP-1	Total/NA	Water	SM 2540C	
MB 400-343672/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-343672/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-134364-G-6 DU	Duplicate	Total/NA	Water	SM 2540C	

### Analysis Batch: 344158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134445-1	FB-1	Total/NA	Water	SM 2540C	
400-134445-2	WGWC-14A	Total/NA	Water	SM 2540C	
400-134445-3	FERB-1	Total/NA	Water	SM 2540C	
MB 400-344158/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-344158/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-134445-2 DU	WGWC-14A	Total/NA	Water	SM 2540C	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 400-343809/31**  
**Matrix: Water**  
**Analysis Batch: 343809**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			02/27/17 22:03	1
Fluoride	<0.082		0.20	0.082	mg/L			02/27/17 22:03	1
Sulfate	<0.70		1.0	0.70	mg/L			02/27/17 22:03	1

**Lab Sample ID: LCS 400-343809/32**  
**Matrix: Water**  
**Analysis Batch: 343809**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.88		mg/L		99	90 - 110
Fluoride	10.0	10.9		mg/L		109	90 - 110
Sulfate	10.0	10.0		mg/L		100	90 - 110

**Lab Sample ID: LCSD 400-343809/33**  
**Matrix: Water**  
**Analysis Batch: 343809**

**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	10.0	9.88		mg/L		99	90 - 110	0	15
Fluoride	10.0	10.8		mg/L		108	90 - 110	1	15
Sulfate	10.0	10.0		mg/L		100	90 - 110	0	15

**Lab Sample ID: 400-134170-D-2 MS**  
**Matrix: Water**  
**Analysis Batch: 343809**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	4.2		10.0	14.7		mg/L		105	80 - 120
Fluoride	<0.082		10.0	11.0		mg/L		110	80 - 120
Sulfate	6.6		10.0	17.2		mg/L		106	80 - 120

**Lab Sample ID: 400-134170-D-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 343809**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	4.2		10.0	14.7		mg/L		105	80 - 120	0	20
Fluoride	<0.082		10.0	10.9		mg/L		109	80 - 120	0	20
Sulfate	6.6		10.0	17.2		mg/L		106	80 - 120	0	20

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

**Lab Sample ID: MB 400-343709/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 344314**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 343709**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		02/27/17 09:15	03/02/17 13:46	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		02/27/17 09:15	03/02/17 13:46	5

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-1  
SDG: Ash Pond

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

**Lab Sample ID: MB 400-343709/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 344314**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 343709**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		02/27/17 09:15	03/02/17 13:46	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		02/27/17 09:15	03/02/17 13:46	5
Boron	<0.021		0.050	0.021	mg/L		02/27/17 09:15	03/02/17 13:46	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		02/27/17 09:15	03/02/17 13:46	5
Calcium	<0.13		0.25	0.13	mg/L		02/27/17 09:15	03/02/17 13:46	5
Chromium	<0.0011		0.0025	0.0011	mg/L		02/27/17 09:15	03/02/17 13:46	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		02/27/17 09:15	03/02/17 13:46	5
Lead	<0.00035		0.0013	0.00035	mg/L		02/27/17 09:15	03/02/17 13:46	5
Lithium	<0.0032		0.0050	0.0032	mg/L		02/27/17 09:15	03/02/17 13:46	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		02/27/17 09:15	03/02/17 13:46	5
Selenium	<0.00024		0.0013	0.00024	mg/L		02/27/17 09:15	03/02/17 13:46	5
Thallium	<0.000085		0.00050	0.000085	mg/L		02/27/17 09:15	03/02/17 13:46	5

**Lab Sample ID: MB 400-343709/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 344584**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 343709**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.0032		0.0050	0.0032	mg/L		02/27/17 09:15	03/03/17 12:56	5

**Lab Sample ID: LCS 400-343709/2-A**  
**Matrix: Water**  
**Analysis Batch: 344314**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 343709**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0606	*	mg/L		121	80 - 120
Arsenic	0.0500	0.0526		mg/L		105	80 - 120
Barium	0.0500	0.0526		mg/L		105	80 - 120
Beryllium	0.0500	0.0519		mg/L		104	80 - 120
Boron	0.100	0.108		mg/L		108	80 - 120
Cadmium	0.0500	0.0544		mg/L		109	80 - 120
Calcium	5.00	5.03		mg/L		101	80 - 120
Chromium	0.0500	0.0504		mg/L		101	80 - 120
Cobalt	0.0500	0.0479		mg/L		96	80 - 120
Lead	0.0500	0.0542		mg/L		108	80 - 120
Lithium	0.0500	0.0526		mg/L		105	80 - 120
Molybdenum	0.100	0.106		mg/L		106	80 - 120
Selenium	0.0500	0.0515		mg/L		103	80 - 120
Thallium	0.0100	0.0111		mg/L		111	80 - 120

**Lab Sample ID: LCS 400-343709/2-A**  
**Matrix: Water**  
**Analysis Batch: 344584**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 343709**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.0500	0.0509		mg/L		102	80 - 120

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-1  
SDG: Ash Pond

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

**Lab Sample ID: 400-134364-I-1-B MS ^5**

**Matrix: Water**

**Analysis Batch: 344314**

**Client Sample ID: Matrix Spike**

**Prep Type: Total Recoverable**

**Prep Batch: 343709**

Analyte	Sample	Sample	Spike	MS		Unit	D	%Rec	%Rec.	
	Result	Qualifier		Result	Qualifier				Limits	Limits
Antimony	<0.0010	F1 *	0.0500	0.0659	F1	mg/L		132	75 - 125	
Arsenic	<0.00046		0.0500	0.0550		mg/L		110	75 - 125	
Barium	0.12		0.0500	0.170		mg/L		108	75 - 125	
Beryllium	<0.00034		0.0500	0.0489		mg/L		98	75 - 125	
Boron	0.022	J	0.100	0.136		mg/L		113	75 - 125	
Cadmium	<0.00034		0.0500	0.0561		mg/L		112	75 - 125	
Calcium	19		5.00	24.4		mg/L		104	75 - 125	
Chromium	0.0042		0.0500	0.0590		mg/L		110	75 - 125	
Cobalt	0.0013	J	0.0500	0.0500		mg/L		97	75 - 125	
Lead	<0.00035		0.0500	0.0488		mg/L		98	75 - 125	
Lithium	<0.0032		0.0500	0.0547		mg/L		109	75 - 125	
Molybdenum	<0.00085		0.100	0.116		mg/L		116	75 - 125	
Selenium	<0.00024		0.0500	0.0559		mg/L		112	75 - 125	
Thallium	<0.000085		0.0100	0.0111		mg/L		111	75 - 125	

**Lab Sample ID: 400-134364-I-1-C MSD ^5**

**Matrix: Water**

**Analysis Batch: 344314**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total Recoverable**

**Prep Batch: 343709**

Analyte	Sample	Sample	Spike	MSD		Unit	D	%Rec	%Rec.		RPD	
	Result	Qualifier		Result	Qualifier				Limits	RPD	Limit	
Antimony	<0.0010	F1 *	0.0500	0.0626		mg/L		125	75 - 125	5	20	
Arsenic	<0.00046		0.0500	0.0542		mg/L		108	75 - 125	1	20	
Barium	0.12		0.0500	0.172		mg/L		111	75 - 125	1	20	
Beryllium	<0.00034		0.0500	0.0472		mg/L		94	75 - 125	4	20	
Boron	0.022	J	0.100	0.127		mg/L		105	75 - 125	6	20	
Cadmium	<0.00034		0.0500	0.0544		mg/L		109	75 - 125	3	20	
Calcium	19		5.00	24.7		mg/L		109	75 - 125	1	20	
Chromium	0.0042		0.0500	0.0591		mg/L		110	75 - 125	0	20	
Cobalt	0.0013	J	0.0500	0.0493		mg/L		96	75 - 125	1	20	
Lead	<0.00035		0.0500	0.0482		mg/L		96	75 - 125	1	20	
Lithium	<0.0032		0.0500	0.0550		mg/L		110	75 - 125	1	20	
Molybdenum	<0.00085		0.100	0.107		mg/L		107	75 - 125	8	20	
Selenium	<0.00024		0.0500	0.0514		mg/L		103	75 - 125	8	20	
Thallium	<0.000085		0.0100	0.0111		mg/L		111	75 - 125	1	20	

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 400-343903/14-A**

**Matrix: Water**

**Analysis Batch: 344162**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 343903**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.0000817	J	0.00020	0.000070	mg/L		02/28/17 09:39	03/01/17 13:02	1

TestAmerica Pensacola



# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-1  
SDG: Ash Pond

## Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID: LCS 400-343903/15-A**  
**Matrix: Water**  
**Analysis Batch: 344162**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 343903**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00109		mg/L		108	80 - 120

**Lab Sample ID: 400-134445-1 MS**  
**Matrix: Water**  
**Analysis Batch: 344162**

**Client Sample ID: FB-1**  
**Prep Type: Total/NA**  
**Prep Batch: 343903**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00211		mg/L		105	80 - 120

**Lab Sample ID: 400-134445-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 344162**

**Client Sample ID: FB-1**  
**Prep Type: Total/NA**  
**Prep Batch: 343903**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00213		mg/L		106	80 - 120	1	20

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

**Lab Sample ID: MB 400-343672/1**  
**Matrix: Water**  
**Analysis Batch: 343672**

**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			02/26/17 15:06	1

**Lab Sample ID: LCS 400-343672/2**  
**Matrix: Water**  
**Analysis Batch: 343672**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	293	290		mg/L		99	78 - 122

**Lab Sample ID: 400-134364-G-6 DU**  
**Matrix: Water**  
**Analysis Batch: 343672**

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	110		108		mg/L		0	5

**Lab Sample ID: MB 400-344158/1**  
**Matrix: Water**  
**Analysis Batch: 344158**

**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			03/01/17 15:35	1

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-1  
 SDG: Ash Pond

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

**Lab Sample ID: LCS 400-344158/2**  
**Matrix: Water**  
**Analysis Batch: 344158**

**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	284		mg/L		97	78 - 122

**Lab Sample ID: 400-134445-2 DU**  
**Matrix: Water**  
**Analysis Batch: 344158**

**Client Sample ID: WGWC-14A**  
**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

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**Chain of Custody Record**

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

**Client Information**  
 Sampler: C. Hurdle Ch., T. Payne *398*  
 Lab P#: Whitmire, Cheyenne R  
 Client Contact: Joju Abraham  
 E-Mail: cheyenne.whitmire@testamericainc.com  
 Phone:   
 Carrier Tracking No(s):   
 Page: 1 of 1  
 Job #:

**Company:** Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7299  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - AP  
 SOW#: CCR

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, L=leachate, A=air)	Field Filtered Sample (Yes or No)	TDS - SM 2640C; Cl <sub>2</sub> F <sub>2</sub> SO <sub>4</sub> - EPA 300	Metals - (Part 287 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320	Total Number of Containers	Special Instructions/Note:
FB-1	2/23/17	11:15	G	W	X	X	X	X	3	
WGWC-14A	2/23/17	11:30	G	GW	X	X	X	X	3	
FERB-1	2/23/17	11:45	G	W	X	X	X	X	3	
DUP-1	2/23/17	-	G	GW	X	X	X	X	3	



**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)

**Empty Kit Relinquished by:**   
 Relinquished by: *[Signature]* Date: 2-23-17 1529 Company: *[Signature]*  
 Relinquished by: *[Signature]* Date: 2-23-17 1446 Company: *[Signature]*  
 Relinquished by: *[Signature]* Date: 2-23-17 1623 Company: *[Signature]*  
 Custody Seal No.: *3180*  
 Custody Seals Intact:  Yes  No  
 Cooler Temperature(s) °C and Other Remarks: *[Signature]*



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-134445-1

SDG Number: Ash Pond

**Login Number: 134445**

**List Number: 1**

**Creator: Siddoway, Benjamin**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.2°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	



# Certification Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-1  
SDG: Ash Pond

## 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: 400-134445-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Plant Wansley

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

3/28/2017 5:30:55 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

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

### LINKS

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

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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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# Method Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-2  
SDG: Ash Pond

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 Wansley

TestAmerica Job ID: 400-134445-2  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-134445-1	FB-1	Water	02/23/17 11:15	02/24/17 16:23
400-134445-2	WGWC-14A	Water	02/23/17 11:30	02/24/17 16:23
400-134445-3	FERB-1	Water	02/23/17 11:45	02/24/17 16:23
400-134445-4	DUP-1	Water	02/23/17 00:00	02/24/17 16:23

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# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-2  
SDG: Ash Pond

**Client Sample ID: FB-1**  
**Date Collected: 02/23/17 11:15**  
**Date Received: 02/24/17 16:23**

**Lab Sample ID: 400-134445-1**  
**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	-0.0113	U	0.0397	0.0397	1.00	0.0928	pCi/L	03/01/17 12:07	03/23/17 14:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					03/01/17 12:07	03/23/17 14:30	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0802	U	0.227	0.228	1.00	0.416	pCi/L	03/01/17 12:09	03/15/17 10:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					03/01/17 12:09	03/15/17 10:11	1
Y Carrier	80.4		40 - 110					03/01/17 12:09	03/15/17 10:11	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0915	U	0.231	0.231	5.00	0.416	pCi/L		03/28/17 09:29	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-2  
SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Lab Sample ID: 400-134445-2**

Date Collected: 02/23/17 11:30

Matrix: Water

Date Received: 02/24/17 16:23

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.416		0.127	0.132	1.00	0.112	pCi/L	03/01/17 12:07	03/23/17 14:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.4		40 - 110					03/01/17 12:07	03/23/17 14:32	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.355	U	0.300	0.302	1.00	0.483	pCi/L	03/01/17 12:09	03/15/17 10:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.4		40 - 110					03/01/17 12:09	03/15/17 10:11	1
Y Carrier	79.6		40 - 110					03/01/17 12:09	03/15/17 10:11	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.771		0.326	0.330	5.00	0.483	pCi/L		03/28/17 09:29	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-2  
SDG: Ash Pond

**Client Sample ID: FERB-1**

**Date Collected: 02/23/17 11:45**

**Date Received: 02/24/17 16:23**

**Lab Sample ID: 400-134445-3**

**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	-0.0135	U	0.0532	0.0532	1.00	0.118	pCi/L	03/01/17 12:07	03/23/17 14:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					03/01/17 12:07	03/23/17 14:32	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.477		0.275	0.279	1.00	0.420	pCi/L	03/01/17 12:09	03/15/17 10:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					03/01/17 12:09	03/15/17 10:11	1
Y Carrier	79.6		40 - 110					03/01/17 12:09	03/15/17 10:11	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.463		0.280	0.284	5.00	0.420	pCi/L		03/28/17 09:29	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-2  
SDG: Ash Pond

**Client Sample ID: DUP-1**  
**Date Collected: 02/23/17 00:00**  
**Date Received: 02/24/17 16:23**

**Lab Sample ID: 400-134445-4**  
**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	0.443		0.126	0.132	1.00	0.103	pCi/L	03/01/17 12:07	03/23/17 14:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					03/01/17 12:07	03/23/17 14:32	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.288	U	0.223	0.224	1.00	0.352	pCi/L	03/01/17 12:09	03/15/17 10:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					03/01/17 12:09	03/15/17 10:11	1
Y Carrier	83.0		40 - 110					03/01/17 12:09	03/15/17 10:11	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.732		0.256	0.260	5.00	0.352	pCi/L		03/28/17 09:29	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-2  
SDG: Ash Pond

## 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 Wansley

TestAmerica Job ID: 400-134445-2  
SDG: Ash Pond

**Client Sample ID: FB-1**

**Date Collected: 02/23/17 11:15**

**Date Received: 02/24/17 16:23**

**Lab Sample ID: 400-134445-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			295314	03/01/17 12:07	BME	TAL SL
Total/NA	Analysis	9315		1	299257	03/23/17 14:30	MLK	TAL SL
Total/NA	Prep	PrecSep_0			295315	03/01/17 12:09	BME	TAL SL
Total/NA	Analysis	9320		1	297725	03/15/17 10:11	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300389	03/28/17 09:29	RTM	TAL SL

**Client Sample ID: WGWC-14A**

**Date Collected: 02/23/17 11:30**

**Date Received: 02/24/17 16:23**

**Lab Sample ID: 400-134445-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			295314	03/01/17 12:07	BME	TAL SL
Total/NA	Analysis	9315		1	299256	03/23/17 14:32	MLK	TAL SL
Total/NA	Prep	PrecSep_0			295315	03/01/17 12:09	BME	TAL SL
Total/NA	Analysis	9320		1	297725	03/15/17 10:11	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300389	03/28/17 09:29	RTM	TAL SL

**Client Sample ID: FERB-1**

**Date Collected: 02/23/17 11:45**

**Date Received: 02/24/17 16:23**

**Lab Sample ID: 400-134445-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			295314	03/01/17 12:07	BME	TAL SL
Total/NA	Analysis	9315		1	299256	03/23/17 14:32	MLK	TAL SL
Total/NA	Prep	PrecSep_0			295315	03/01/17 12:09	BME	TAL SL
Total/NA	Analysis	9320		1	297725	03/15/17 10:11	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300389	03/28/17 09:29	RTM	TAL SL

**Client Sample ID: DUP-1**

**Date Collected: 02/23/17 00:00**

**Date Received: 02/24/17 16:23**

**Lab Sample ID: 400-134445-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			295314	03/01/17 12:07	BME	TAL SL
Total/NA	Analysis	9315		1	299256	03/23/17 14:32	MLK	TAL SL
Total/NA	Prep	PrecSep_0			295315	03/01/17 12:09	BME	TAL SL
Total/NA	Analysis	9320		1	297725	03/15/17 10:11	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300389	03/28/17 09:29	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 Wansley

TestAmerica Job ID: 400-134445-2  
SDG: Ash Pond

## Rad

### Prep Batch: 295314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134445-1	FB-1	Total/NA	Water	PrecSep-21	
400-134445-2	WGWC-14A	Total/NA	Water	PrecSep-21	
400-134445-3	FERB-1	Total/NA	Water	PrecSep-21	
400-134445-4	DUP-1	Total/NA	Water	PrecSep-21	
MB 160-295314/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-295314/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
240-75985-B-4-B MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep-21	
240-75985-F-4-B MS	Matrix Spike	Total/NA	Water	PrecSep-21	

### Prep Batch: 295315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134445-1	FB-1	Total/NA	Water	PrecSep_0	
400-134445-2	WGWC-14A	Total/NA	Water	PrecSep_0	
400-134445-3	FERB-1	Total/NA	Water	PrecSep_0	
400-134445-4	DUP-1	Total/NA	Water	PrecSep_0	
MB 160-295315/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-295315/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
240-75985-B-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep_0	
240-75985-F-4-C MS	Matrix Spike	Total/NA	Water	PrecSep_0	



# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-2  
SDG: Ash Pond

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

**Lab Sample ID: MB 160-295314/1-A**  
**Matrix: Water**  
**Analysis Batch: 299257**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 295314**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.01301	U	0.0578	0.0578	1.00	0.121	pCi/L	03/01/17 12:07	03/23/17 14:28	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					03/01/17 12:07	03/23/17 14:28	1

**Lab Sample ID: LCS 160-295314/2-A**  
**Matrix: Water**  
**Analysis Batch: 299257**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 295314**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	9.363		0.979	1.00	0.0967	pCi/L	82	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	100		40 - 110						

**Lab Sample ID: 240-75985-B-4-B MSD**  
**Matrix: Water**  
**Analysis Batch: 299257**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 295314**

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	0.151		11.4	9.964		1.04	1.00	0.102	pCi/L	86	75 - 138	0.12	1
Carrier	MSD %Yield	MSD Qualifier	Limits										
Ba Carrier	95.0		40 - 110										

**Lab Sample ID: 240-75985-F-4-B MS**  
**Matrix: Water**  
**Analysis Batch: 299257**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 295314**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	0.151		11.4	10.23		1.07	1.00	0.116	pCi/L	89	75 - 138
Carrier	MS %Yield	MS Qualifier	Limits								
Ba Carrier	93.8		40 - 110								

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-2  
SDG: Ash Pond

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

**Lab Sample ID: MB 160-295315/1-A**  
**Matrix: Water**  
**Analysis Batch: 297882**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 295315**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.2626	U	0.239	0.240	1.00	0.385	pCi/L	03/01/17 12:09	03/15/17 10:06	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
	%Yield	Qualifier								
Ba Carrier	96.2		40 - 110		03/01/17 12:09	03/15/17 10:06	1			
Y Carrier	76.6		40 - 110		03/01/17 12:09	03/15/17 10:06	1			

**Lab Sample ID: LCS 160-295315/2-A**  
**Matrix: Water**  
**Analysis Batch: 297882**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 295315**

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-228	13.7	14.94		1.57	1.00	0.325	pCi/L	109	56 - 140
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
	%Yield	Qualifier							
Ba Carrier	100		40 - 110						
Y Carrier	84.1		40 - 110						

**Lab Sample ID: 240-75985-B-4-C MSD**  
**Matrix: Water**  
**Analysis Batch: 297882**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 295315**

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	Limit
						Uncert. (2σ+/-)							
Radium-228	0.171	U	13.7	15.62		1.65	1.00	0.350	pCi/L	114	45 - 150	0.14	1
Carrier	MSD MSD		Limits		Prepared	Analyzed	Dil Fac						
	%Yield	Qualifier											
Ba Carrier	95.0		40 - 110										
Y Carrier	82.6		40 - 110										

**Lab Sample ID: 240-75985-F-4-C MS**  
**Matrix: Water**  
**Analysis Batch: 297882**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 295315**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
						Uncert. (2σ+/-)					
Radium-228	0.171	U	13.7	16.08		1.70	1.00	0.345	pCi/L	117	45 - 150
Carrier	MS MS		Limits		Prepared	Analyzed	Dil Fac				
	%Yield	Qualifier									
Ba Carrier	93.8		40 - 110								
Y Carrier	81.5		40 - 110								

**Chain of Custody Record**

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

**Client Information**  
 Client Contact: Joju Abraham  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - AP  
 Site: CCR

**Sampler:** C. Hurdle Ch., T. Payne 397  
**Lab P/N:** Whitfire, Cheyenne R  
**Phone:** cheyenne.whitfire@testamericainc.com  
**Carrier Tracking No(s):**  
**Job #:**  
**Due Date Requested:**  
**TAT Requested (days):**  
**PO #:**  
**WO #:**  
**Project #:**  
**SSOW#:**

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, B=soil, A=air)	Field Filtered Sample (Yes or No)	Metals - (Part 287 Appendix III & IV) EPA 6020 & EPA 7470	TDS - SM 2640C ; Cl, F, SO4 - EPA 300	Total Number of Containers	Special Instructions/Note:
FB-1	2/23/17	11:15	G	W	X	X	X	3	
WGWC-14A	2/23/17	11:30	G	GW	X	X	X	3	
FERB-1	2/23/17	11:45	G	W	X	X	X	3	
DUP-1	2/23/17	-	G	GW	X	X	X	3	



**Possible Hazard Identification**  
 Non-Hazard  
 Flammable  
 Skin Irritant  
 Poison B  
 Unknown  
 Radiological  
**Deliverable Requested:** I, II, III, IV, Other (specify)

**Empty Kit Relinquished by:**  
 Relinquished by: [Signature] Date: 2-23-17 1529  
 Relinquished by: [Signature] Date: 2-23-17 1529  
 Relinquished by: [Signature] Date: 2-23-17 1529  
**Company:** [Signature] Company  
**Company:** [Signature] Company  
**Company:** [Signature] Company  
**Custody Seal No.:** [Signature]  
**Custody Seals Intact:** Δ Yes Δ No  
**Cooler Temperature(s) °C and Other Remarks:** 3.8°C [Signature]

081-Atlanta



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-134445-2

SDG Number: Ash Pond

**Login Number: 134445**

**List Number: 1**

**Creator: Siddoway, Benjamin**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.2°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	



# Certification Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-2  
SDG: Ash Pond

## Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP Secondary AB	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

## Laboratory: TestAmerica St. Louis

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-17
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-17 *
Florida	NELAP	4	E87689	06-30-17
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17
Nevada	State Program	9	MO000542017-1	07-31-17
New Jersey	NELAP	2	MO002	06-30-17 *
New York	NELAP	2	11616	03-31-17 *

\* Certification renewal pending - certification considered valid.

TestAmerica Pensacola

# Certification Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-134445-2  
SDG: Ash Pond

## Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
North Dakota	State Program	8	R207	06-30-17
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-18
South Carolina	State Program	4	85002001	06-30-17
Texas	NELAP	6	T104704193-16-10	07-31-17
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-17
Virginia	NELAP	3	460230	06-14-17
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-17 *

\* Certification renewal pending - certification considered valid.

TestAmerica Pensacola

# 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: 400-135240-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Plant Wansley

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

3/31/2017 6:13:52 PM

Cheyenne Whitmire, Project Manager II

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# Case Narrative

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Job ID: 400-135240-1**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-135240-1

#### HPLC/IC

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: WGWC-16 (400-135240-15) and WGWC-8 (400-135240-18). Elevated reporting limits (RLs) are provided.

#### Metals

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 346437 and analytical batch 346660 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 duplicate MSD precision for preparation batch 346437 and analytical batch 346660 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) precision was within acceptance limits.

Method(s) 6020: The native sample and post digestion spike associated with preparation batch 346432 and analytical batch 346822 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 have been reported and qualified.

Method(s) 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: WGWC-16 (400-135240-15) and (400-135255-B-2-B ^25). Elevated reporting limits (RLs) are provided.

Method(s) 6020: The continuing calibration verification (CCV) associated with batch 347015 recovered above the upper control limit for Lead. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: WGWC-14A (400-135240-26) and (400-135255-B-2-B ^5).

Method(s) 6020: The serial dilution performed for the following sample associated with batch 347015 was outside control limits for Chromium: (400-135255-B-2-B SD)

Method(s) 6020: The post digestion spike % recovery for Lead associated with batch 347015 was outside of control limits.

Method(s) 6020: The native sample and post digestion spike associated with preparation batch 346573 and analytical batch 347015 were performed at the same dilution. Due to the additional level of analyte present in the spiked sample, the concentration of Calcium in the PDS was above the instrument calibration range. The data have been reported and qualified.

Method(s) 7470A: The method blank for prep batch 346429 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.

# Detection Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

## Client Sample ID: WGWA-18

## Lab Sample ID: 400-135240-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.9		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	10		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0014		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.017		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	13		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0045		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0072	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0028		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Mercury	0.000071	J F2	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	70		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-7

## Lab Sample ID: 400-135240-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.8		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.010		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.3		0.25	0.13	mg/L	5		6020	Total Recoverable
Molybdenum	0.0014	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	26		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-3

## Lab Sample ID: 400-135240-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.6		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.83	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.014		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Molybdenum	0.00087	J	0.015	0.00085	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

## Client Sample ID: WGWA-4

## Lab Sample ID: 400-135240-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.2		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.13	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	4.6		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.0058		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	17		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 Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

## Client Sample ID: WGWA-4 (Continued)

## Lab Sample ID: 400-135240-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.0033	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	110		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-5

## Lab Sample ID: 400-135240-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.0		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	1.4		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.018		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.6		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0066		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	32		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-17

## Lab Sample ID: 400-135240-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.5		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.11	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	9.6		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.019		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	8.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0023	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0048	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0044	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

## Client Sample ID: WGWA-6

## Lab Sample ID: 400-135240-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.5		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	2.0		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.014		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	20		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0018	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0038	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	110		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-15

## Lab Sample ID: 400-135240-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.4		1.0	0.89	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

## Client Sample ID: WGWC-15 (Continued)

## Lab Sample ID: 400-135240-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.77		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	43		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0016		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.018		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	29		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0057		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0034	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Mercury	0.000071	J	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	220		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FB-1

## Lab Sample ID: 400-135240-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	4.0	J	5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FERB-1

## Lab Sample ID: 400-135240-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0014	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable

## Client Sample ID: DUP-1

## Lab Sample ID: 400-135240-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.5		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	2.4		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.014		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	19		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0018	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0039	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	74		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-1

## Lab Sample ID: 400-135240-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.4		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.042		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0011	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable

## Client Sample ID: WGWA-2

## Lab Sample ID: 400-135240-13

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

## Client Sample ID: WGWA-2 (Continued)

## Lab Sample ID: 400-135240-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.2		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.97	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.019		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	14		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00087	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0069		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	58		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-13

## Lab Sample ID: 400-135240-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.30		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	11		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.058		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	6.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Molybdenum	0.0022	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

## Client Sample ID: WGWC-16

## Lab Sample ID: 400-135240-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	330		10	8.9	mg/L	10		300.0	Total/NA
Fluoride	0.10	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	610		20	14	mg/L	20		300.0	Total/NA
Arsenic	0.0014		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.065		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00067	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cobalt	0.014		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.010		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.012		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00021	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	5.9		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	260		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	1500		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-11

## Lab Sample ID: 400-135240-16

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

## Client Sample ID: WGWC-11 (Continued)

## Lab Sample ID: 400-135240-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.1		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	2.5		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.032		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.058		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	3.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00064	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	54		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-19

## Lab Sample ID: 400-135240-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.37		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	3.6		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.0015	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.034	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	10		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00045	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.052		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	120		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-8

## Lab Sample ID: 400-135240-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	38		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.25		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	170		5.0	3.5	mg/L	5		300.0	Total/NA
Barium	0.0013	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.0016	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Boron	1.7		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	38		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.014		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.0030		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Mercury	0.00013	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	370		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-10

## Lab Sample ID: 400-135240-19

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

## Client Sample ID: WGWC-10 (Continued)

## Lab Sample ID: 400-135240-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.16	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	2.7		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.040		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.032	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	9.0		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	0.00062	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.014		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	78		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-12

## Lab Sample ID: 400-135240-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.2		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	17		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.024		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	16		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0016	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0077		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Mercury	0.00018	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	120		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-9

## Lab Sample ID: 400-135240-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.3		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	1.3		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	44		1.0	0.70	mg/L	1		300.0	Total/NA
Antimony	0.0011	J	0.0025	0.0010	mg/L	5		6020	Total Recoverable
Arsenic	0.00047	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.00054	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.42		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	8.6		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.035		0.0050	0.0032	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 Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

## Client Sample ID: WGWC-9 (Continued)

## Lab Sample ID: 400-135240-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	0.0057	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0031		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Mercury	0.00013	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	160		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FB-2

## Lab Sample ID: 400-135240-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Selenium	0.00030	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Mercury	0.00014	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

## Client Sample ID: FERB-2

## Lab Sample ID: 400-135240-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.00013	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

## Client Sample ID: DUP-2

## Lab Sample ID: 400-135240-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.38		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	3.7		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.0015	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	11		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.052		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0017	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Mercury	0.00014	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	110		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-14A

## Lab Sample ID: 400-135240-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.8		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	22		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00060	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.046		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.013		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	56		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola



# Method Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN

#### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-135240-1	WGWA-18	Water	03/14/17 10:45	03/16/17 09:09
400-135240-2	WGWA-7	Water	03/14/17 10:50	03/16/17 09:09
400-135240-3	WGWA-3	Water	03/14/17 12:15	03/16/17 09:09
400-135240-4	WGWA-4	Water	03/14/17 12:15	03/16/17 09:09
400-135240-5	WGWA-5	Water	03/14/17 12:40	03/16/17 09:09
400-135240-6	WGWC-17	Water	03/14/17 14:15	03/16/17 09:09
400-135240-7	WGWA-6	Water	03/14/17 14:41	03/16/17 09:09
400-135240-8	WGWC-15	Water	03/14/17 14:50	03/16/17 09:09
400-135240-9	FB-1	Water	03/14/17 12:10	03/16/17 09:09
400-135240-10	FERB-1	Water	03/14/17 12:30	03/16/17 09:09
400-135240-11	DUP-1	Water	03/14/17 00:00	03/16/17 09:09
400-135240-12	WGWA-1	Water	03/13/17 15:50	03/16/17 09:09
400-135240-13	WGWA-2	Water	03/13/17 16:05	03/16/17 09:09
400-135240-14	WGWC-13	Water	03/15/17 09:20	03/17/17 09:01
400-135240-15	WGWC-16	Water	03/15/17 10:05	03/17/17 09:01
400-135240-16	WGWC-11	Water	03/15/17 10:15	03/17/17 09:01
400-135240-17	WGWC-19	Water	03/15/17 10:20	03/17/17 09:01
400-135240-18	WGWC-8	Water	03/15/17 11:20	03/17/17 09:01
400-135240-19	WGWC-10	Water	03/15/17 11:50	03/17/17 09:01
400-135240-20	WGWC-12	Water	03/15/17 11:55	03/17/17 09:01
400-135240-21	WGWC-9	Water	03/15/17 14:35	03/17/17 09:01
400-135240-22	FB-2	Water	03/15/17 09:35	03/17/17 09:01
400-135240-23	FERB-2	Water	03/15/17 11:00	03/17/17 09:01
400-135240-24	DUP-2	Water	03/15/17 00:00	03/17/17 09:01
400-135240-26	WGWC-14A	Water	03/17/17 10:00	03/18/17 09:51

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWA-18**

**Date Collected: 03/14/17 10:45**

**Date Received: 03/16/17 09:09**

**Lab Sample ID: 400-135240-1**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>1.9</b>		1.0	0.89	mg/L			03/16/17 14:47	1
Fluoride	<0.082		0.20	0.082	mg/L			03/16/17 14:47	1
<b>Sulfate</b>	<b>10</b>		1.0	0.70	mg/L			03/16/17 14:47	1

### 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		03/20/17 13:10	03/22/17 16:06	5
<b>Arsenic</b>	<b>0.0014</b>		0.0013	0.00046	mg/L		03/20/17 13:10	03/22/17 16:06	5
<b>Barium</b>	<b>0.017</b>		0.0025	0.00049	mg/L		03/20/17 13:10	03/22/17 16:06	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 16:06	5
Boron	<0.021		0.050	0.021	mg/L		03/20/17 13:10	03/22/17 16:06	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 16:06	5
<b>Calcium</b>	<b>13</b>		0.25	0.13	mg/L		03/20/17 13:10	03/22/17 16:06	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:10	03/22/17 16:06	5
<b>Cobalt</b>	<b>0.0045</b>		0.0025	0.00040	mg/L		03/20/17 13:10	03/22/17 16:06	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:10	03/22/17 16:06	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/20/17 13:10	03/22/17 16:06	5
<b>Molybdenum</b>	<b>0.0072</b>	<b>J</b>	0.015	0.00085	mg/L		03/20/17 13:10	03/22/17 16:06	5
<b>Selenium</b>	<b>0.0028</b>		0.0013	0.00024	mg/L		03/20/17 13:10	03/22/17 16:06	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:10	03/22/17 16:06	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.000071</b>	<b>J F2</b>	0.00020	0.000070	mg/L		03/20/17 11:59	03/21/17 14:38	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>70</b>		5.0	3.4	mg/L			03/19/17 12:47	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWA-7**

**Date Collected: 03/14/17 10:50**

**Date Received: 03/16/17 09:09**

**Lab Sample ID: 400-135240-2**

**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>1.8</b>		1.0	0.89	mg/L			03/16/17 15:10	1
Fluoride	<0.082		0.20	0.082	mg/L			03/16/17 15:10	1
Sulfate	<0.70		1.0	0.70	mg/L			03/16/17 15:10	1

**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		03/20/17 13:10	03/22/17 16:11	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:10	03/22/17 16:11	5
<b>Barium</b>	<b>0.010</b>		0.0025	0.00049	mg/L		03/20/17 13:10	03/22/17 16:11	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 16:11	5
Boron	<0.021		0.050	0.021	mg/L		03/20/17 13:10	03/22/17 16:11	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 16:11	5
<b>Calcium</b>	<b>1.3</b>		0.25	0.13	mg/L		03/20/17 13:10	03/22/17 16:11	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:10	03/22/17 16:11	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/20/17 13:10	03/22/17 16:11	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:10	03/22/17 16:11	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/20/17 13:10	03/22/17 16:11	5
<b>Molybdenum</b>	<b>0.0014 J</b>		0.015	0.00085	mg/L		03/20/17 13:10	03/22/17 16:11	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/20/17 13:10	03/22/17 16:11	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:10	03/22/17 16:11	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		03/20/17 11:59	03/21/17 14:43	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>26</b>		5.0	3.4	mg/L			03/19/17 12:47	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWA-3**

**Lab Sample ID: 400-135240-3**

**Date Collected: 03/14/17 12:15**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>1.6</b>		1.0	0.89	mg/L			03/16/17 15:33	1
Fluoride	<0.082		0.20	0.082	mg/L			03/16/17 15:33	1
<b>Sulfate</b>	<b>0.83</b>	<b>J</b>	1.0	0.70	mg/L			03/16/17 15:33	1

### 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		03/20/17 13:10	03/22/17 16:51	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:10	03/22/17 16:51	5
<b>Barium</b>	<b>0.014</b>		0.0025	0.00049	mg/L		03/20/17 13:10	03/22/17 16:51	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 16:51	5
Boron	<0.021		0.050	0.021	mg/L		03/20/17 13:10	03/22/17 16:51	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 16:51	5
<b>Calcium</b>	<b>1.8</b>		0.25	0.13	mg/L		03/20/17 13:10	03/22/17 16:51	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:10	03/22/17 16:51	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/20/17 13:10	03/22/17 16:51	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:10	03/22/17 16:51	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/20/17 13:10	03/22/17 16:51	5
<b>Molybdenum</b>	<b>0.00087</b>	<b>J</b>	0.015	0.00085	mg/L		03/20/17 13:10	03/22/17 16:51	5
<b>Selenium</b>	<b>0.00026</b>	<b>J</b>	0.0013	0.00024	mg/L		03/20/17 13:10	03/22/17 16:51	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:10	03/22/17 16:51	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		03/20/17 11:59	03/21/17 14:45	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>22</b>		5.0	3.4	mg/L			03/19/17 12:47	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-135240-4**

**Date Collected: 03/14/17 12:15**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.2		1.0	0.89	mg/L			03/16/17 16:41	1
Fluoride	0.13	J	0.20	0.082	mg/L			03/16/17 16:41	1
Sulfate	4.6		1.0	0.70	mg/L			03/16/17 16:41	1

### 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		03/20/17 13:10	03/22/17 16:56	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:10	03/22/17 16:56	5
Barium	0.0058		0.0025	0.00049	mg/L		03/20/17 13:10	03/22/17 16:56	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 16:56	5
Boron	<0.021		0.050	0.021	mg/L		03/20/17 13:10	03/22/17 16:56	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 16:56	5
Calcium	17		0.25	0.13	mg/L		03/20/17 13:10	03/22/17 16:56	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:10	03/22/17 16:56	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/20/17 13:10	03/22/17 16:56	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:10	03/22/17 16:56	5
Lithium	0.0033	J	0.0050	0.0032	mg/L		03/20/17 13:10	03/22/17 16:56	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/20/17 13:10	03/22/17 16:56	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/20/17 13:10	03/22/17 16:56	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:10	03/22/17 16:56	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		03/20/17 11:59	03/21/17 14:46	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	110		5.0	3.4	mg/L			03/19/17 12:47	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWA-5**

**Date Collected: 03/14/17 12:40**

**Date Received: 03/16/17 09:09**

**Lab Sample ID: 400-135240-5**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>2.0</b>		1.0	0.89	mg/L			03/16/17 17:04	1
Fluoride	<0.082		0.20	0.082	mg/L			03/16/17 17:04	1
<b>Sulfate</b>	<b>1.4</b>		1.0	0.70	mg/L			03/16/17 17:04	1

### 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		03/20/17 13:10	03/22/17 17:00	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:10	03/22/17 17:00	5
<b>Barium</b>	<b>0.018</b>		0.0025	0.00049	mg/L		03/20/17 13:10	03/22/17 17:00	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 17:00	5
Boron	<0.021		0.050	0.021	mg/L		03/20/17 13:10	03/22/17 17:00	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 17:00	5
<b>Calcium</b>	<b>1.6</b>		0.25	0.13	mg/L		03/20/17 13:10	03/22/17 17:00	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:10	03/22/17 17:00	5
<b>Cobalt</b>	<b>0.0066</b>		0.0025	0.00040	mg/L		03/20/17 13:10	03/22/17 17:00	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:10	03/22/17 17:00	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/20/17 13:10	03/22/17 17:00	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/20/17 13:10	03/22/17 17:00	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/20/17 13:10	03/22/17 17:00	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:10	03/22/17 17:00	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		03/20/17 11:59	03/21/17 14:48	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>32</b>		5.0	3.4	mg/L			03/19/17 12:47	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-135240-6**

**Date Collected: 03/14/17 14:15**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.5		1.0	0.89	mg/L			03/16/17 17:27	1
Fluoride	0.11	J	0.20	0.082	mg/L			03/16/17 17:27	1
Sulfate	9.6		1.0	0.70	mg/L			03/16/17 17:27	1

### 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		03/20/17 13:10	03/22/17 17:05	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:10	03/22/17 17:05	5
Barium	0.019		0.0025	0.00049	mg/L		03/20/17 13:10	03/22/17 17:05	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 17:05	5
Boron	<0.021		0.050	0.021	mg/L		03/20/17 13:10	03/22/17 17:05	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 17:05	5
Calcium	8.8		0.25	0.13	mg/L		03/20/17 13:10	03/22/17 17:05	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:10	03/22/17 17:05	5
Cobalt	0.0023	J	0.0025	0.00040	mg/L		03/20/17 13:10	03/22/17 17:05	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:10	03/22/17 17:05	5
Lithium	0.0048	J	0.0050	0.0032	mg/L		03/20/17 13:10	03/22/17 17:05	5
Molybdenum	0.0044	J	0.015	0.00085	mg/L		03/20/17 13:10	03/22/17 17:05	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/20/17 13:10	03/22/17 17:05	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:10	03/22/17 17:05	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		03/20/17 11:59	03/21/17 14:49	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	120		5.0	3.4	mg/L			03/19/17 12:47	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-135240-7**

**Date Collected: 03/14/17 14:41**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>2.5</b>		1.0	0.89	mg/L			03/16/17 17:50	1
Fluoride	<0.082		0.20	0.082	mg/L			03/16/17 17:50	1
<b>Sulfate</b>	<b>2.0</b>		1.0	0.70	mg/L			03/16/17 17:50	1

### 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		03/20/17 13:10	03/22/17 17:09	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:10	03/22/17 17:09	5
<b>Barium</b>	<b>0.014</b>		0.0025	0.00049	mg/L		03/20/17 13:10	03/22/17 17:09	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 17:09	5
Boron	<0.021		0.050	0.021	mg/L		03/20/17 13:10	03/22/17 17:09	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 17:09	5
<b>Calcium</b>	<b>20</b>		0.25	0.13	mg/L		03/20/17 13:10	03/22/17 17:09	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:10	03/22/17 17:09	5
<b>Cobalt</b>	<b>0.0018</b>	<b>J</b>	0.0025	0.00040	mg/L		03/20/17 13:10	03/22/17 17:09	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:10	03/22/17 17:09	5
<b>Lithium</b>	<b>0.0038</b>	<b>J</b>	0.0050	0.0032	mg/L		03/20/17 13:10	03/22/17 17:09	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/20/17 13:10	03/22/17 17:09	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/20/17 13:10	03/22/17 17:09	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:10	03/22/17 17:09	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		03/20/17 11:59	03/21/17 14:50	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>110</b>		5.0	3.4	mg/L			03/19/17 12:47	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWC-15**

**Date Collected: 03/14/17 14:50**

**Date Received: 03/16/17 09:09**

**Lab Sample ID: 400-135240-8**

**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.4		1.0	0.89	mg/L			03/16/17 18:12	1
Fluoride	0.77		0.20	0.082	mg/L			03/16/17 18:12	1
Sulfate	43		1.0	0.70	mg/L			03/16/17 18:12	1

**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		03/20/17 13:10	03/22/17 17:14	5
Arsenic	0.0016		0.0013	0.00046	mg/L		03/20/17 13:10	03/22/17 17:14	5
Barium	0.018		0.0025	0.00049	mg/L		03/20/17 13:10	03/22/17 17:14	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 17:14	5
Boron	<0.021		0.050	0.021	mg/L		03/20/17 13:10	03/22/17 17:14	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 17:14	5
Calcium	29		0.25	0.13	mg/L		03/20/17 13:10	03/22/17 17:14	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:10	03/22/17 17:14	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/20/17 13:10	03/22/17 17:14	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:10	03/22/17 17:14	5
Lithium	0.0057		0.0050	0.0032	mg/L		03/20/17 13:10	03/22/17 17:14	5
Molybdenum	0.0034	J	0.015	0.00085	mg/L		03/20/17 13:10	03/22/17 17:14	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/20/17 13:10	03/22/17 17:14	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:10	03/22/17 17:14	5

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000071	J	0.00020	0.000070	mg/L		03/20/17 11:59	03/21/17 15:00	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	220		5.0	3.4	mg/L			03/19/17 12:47	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: FB-1**  
**Date Collected: 03/14/17 12:10**  
**Date Received: 03/16/17 09:09**

**Lab Sample ID: 400-135240-9**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			03/16/17 18:35	1
Fluoride	<0.082		0.20	0.082	mg/L			03/16/17 18:35	1
Sulfate	<0.70		1.0	0.70	mg/L			03/16/17 18:35	1

### 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		03/20/17 13:10	03/22/17 17:18	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:10	03/22/17 17:18	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/20/17 13:10	03/22/17 17:18	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 17:18	5
Boron	<0.021		0.050	0.021	mg/L		03/20/17 13:10	03/22/17 17:18	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 17:18	5
Calcium	<0.13		0.25	0.13	mg/L		03/20/17 13:10	03/22/17 17:18	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:10	03/22/17 17:18	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/20/17 13:10	03/22/17 17:18	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:10	03/22/17 17:18	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/20/17 13:10	03/22/17 17:18	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/20/17 13:10	03/22/17 17:18	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/20/17 13:10	03/22/17 17:18	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:10	03/22/17 17:18	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		03/20/17 11:59	03/21/17 15:02	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4.0	J	5.0	3.4	mg/L			03/19/17 12:47	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: FERB-1**

**Lab Sample ID: 400-135240-10**

**Date Collected: 03/14/17 12:30**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			03/16/17 19:21	1
Fluoride	<0.082		0.20	0.082	mg/L			03/16/17 19:21	1
Sulfate	<0.70		1.0	0.70	mg/L			03/16/17 19:21	1

### 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		03/20/17 13:10	03/22/17 17:23	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:10	03/22/17 17:23	5
<b>Barium</b>	<b>0.0014</b>	<b>J</b>	0.0025	0.00049	mg/L		03/20/17 13:10	03/22/17 17:23	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 17:23	5
Boron	<0.021		0.050	0.021	mg/L		03/20/17 13:10	03/22/17 17:23	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 17:23	5
Calcium	<0.13		0.25	0.13	mg/L		03/20/17 13:10	03/22/17 17:23	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:10	03/22/17 17:23	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/20/17 13:10	03/22/17 17:23	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:10	03/22/17 17:23	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/20/17 13:10	03/22/17 17:23	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/20/17 13:10	03/22/17 17:23	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/20/17 13:10	03/22/17 17:23	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:10	03/22/17 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		03/20/17 11:59	03/21/17 15:03	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			03/19/17 12:47	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: DUP-1**

**Date Collected: 03/14/17 00:00**

**Date Received: 03/16/17 09:09**

**Lab Sample ID: 400-135240-11**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>2.5</b>		1.0	0.89	mg/L			03/16/17 19:44	1
Fluoride	<0.082		0.20	0.082	mg/L			03/16/17 19:44	1
<b>Sulfate</b>	<b>2.4</b>		1.0	0.70	mg/L			03/16/17 19:44	1

### 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		03/20/17 13:10	03/22/17 17:45	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:10	03/22/17 17:45	5
<b>Barium</b>	<b>0.014</b>		0.0025	0.00049	mg/L		03/20/17 13:10	03/22/17 17:45	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 17:45	5
Boron	<0.021		0.050	0.021	mg/L		03/20/17 13:10	03/22/17 17:45	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 17:45	5
<b>Calcium</b>	<b>19</b>		0.25	0.13	mg/L		03/20/17 13:10	03/22/17 17:45	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:10	03/22/17 17:45	5
<b>Cobalt</b>	<b>0.0018</b>	<b>J</b>	0.0025	0.00040	mg/L		03/20/17 13:10	03/22/17 17:45	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:10	03/22/17 17:45	5
<b>Lithium</b>	<b>0.0039</b>	<b>J</b>	0.0050	0.0032	mg/L		03/20/17 13:10	03/22/17 17:45	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/20/17 13:10	03/22/17 17:45	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/20/17 13:10	03/22/17 17:45	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:10	03/22/17 17:45	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		03/20/17 11:59	03/21/17 15:04	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>74</b>		5.0	3.4	mg/L			03/19/17 11:56	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWA-1**

**Lab Sample ID: 400-135240-12**

**Date Collected: 03/13/17 15:50**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.4</b>		1.0	0.89	mg/L			03/16/17 20:06	1
Fluoride	<0.082		0.20	0.082	mg/L			03/16/17 20:06	1
Sulfate	<0.70		1.0	0.70	mg/L			03/16/17 20:06	1

### 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		03/20/17 13:10	03/22/17 17:50	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:10	03/22/17 17:50	5
<b>Barium</b>	<b>0.042</b>		0.0025	0.00049	mg/L		03/20/17 13:10	03/22/17 17:50	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 17:50	5
Boron	<0.021		0.050	0.021	mg/L		03/20/17 13:10	03/22/17 17:50	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 17:50	5
<b>Calcium</b>	<b>1.1</b>		0.25	0.13	mg/L		03/20/17 13:10	03/22/17 17:50	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:10	03/22/17 17:50	5
<b>Cobalt</b>	<b>0.0011</b>	<b>J</b>	0.0025	0.00040	mg/L		03/20/17 13:10	03/22/17 17:50	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:10	03/22/17 17:50	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/20/17 13:10	03/22/17 17:50	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/20/17 13:10	03/22/17 17:50	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/20/17 13:10	03/22/17 17:50	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:10	03/22/17 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		03/20/17 11:59	03/21/17 15:05	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			03/19/17 11:56	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWA-2**

**Lab Sample ID: 400-135240-13**

**Date Collected: 03/13/17 16:05**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>2.2</b>		1.0	0.89	mg/L			03/16/17 21:15	1
Fluoride	<0.082		0.20	0.082	mg/L			03/16/17 21:15	1
<b>Sulfate</b>	<b>0.97</b>	<b>J</b>	1.0	0.70	mg/L			03/16/17 21:15	1

### 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		03/20/17 13:10	03/22/17 17:54	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:10	03/22/17 17:54	5
<b>Barium</b>	<b>0.019</b>		0.0025	0.00049	mg/L		03/20/17 13:10	03/22/17 17:54	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 17:54	5
Boron	<0.021		0.050	0.021	mg/L		03/20/17 13:10	03/22/17 17:54	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 17:54	5
<b>Calcium</b>	<b>14</b>		0.25	0.13	mg/L		03/20/17 13:10	03/22/17 17:54	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:10	03/22/17 17:54	5
<b>Cobalt</b>	<b>0.00087</b>	<b>J</b>	0.0025	0.00040	mg/L		03/20/17 13:10	03/22/17 17:54	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:10	03/22/17 17:54	5
<b>Lithium</b>	<b>0.0069</b>		0.0050	0.0032	mg/L		03/20/17 13:10	03/22/17 17:54	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/20/17 13:10	03/22/17 17:54	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/20/17 13:10	03/22/17 17:54	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:10	03/22/17 17:54	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		03/20/17 11:59	03/21/17 15:06	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>58</b>		5.0	3.4	mg/L			03/19/17 11:56	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-135240-14**

Date Collected: 03/15/17 09:20

Matrix: Water

Date Received: 03/17/17 09:01

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4		1.0	0.89	mg/L			03/17/17 20:54	1
Fluoride	0.30		0.20	0.082	mg/L			03/17/17 20:54	1
Sulfate	11		1.0	0.70	mg/L			03/17/17 20:54	1

### 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		03/20/17 13:10	03/22/17 17:59	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:10	03/22/17 17:59	5
Barium	0.058		0.0025	0.00049	mg/L		03/20/17 13:10	03/22/17 17:59	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 17:59	5
Boron	<0.021		0.050	0.021	mg/L		03/20/17 13:10	03/22/17 17:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 17:59	5
Calcium	6.7		0.25	0.13	mg/L		03/20/17 13:10	03/22/17 17:59	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:10	03/22/17 17:59	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/20/17 13:10	03/22/17 17:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:10	03/22/17 17:59	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/20/17 13:10	03/22/17 17:59	5
Molybdenum	0.0022	J	0.015	0.00085	mg/L		03/20/17 13:10	03/22/17 17:59	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/20/17 13:10	03/22/17 17:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:10	03/22/17 17:59	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		03/20/17 11:59	03/21/17 15:08	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	100		5.0	3.4	mg/L			03/20/17 13:13	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWC-16**

**Date Collected: 03/15/17 10:05**

**Date Received: 03/17/17 09:01**

**Lab Sample ID: 400-135240-15**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	330		10	8.9	mg/L			03/20/17 15:09	10
Fluoride	0.10	J	0.20	0.082	mg/L			03/17/17 22:03	1
Sulfate	610		20	14	mg/L			03/20/17 22:06	20

### 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		03/20/17 13:10	03/22/17 18:03	5
Arsenic	0.0014		0.0013	0.00046	mg/L		03/20/17 13:10	03/22/17 18:03	5
Barium	0.065		0.0025	0.00049	mg/L		03/20/17 13:10	03/22/17 18:03	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 18:03	5
Cadmium	0.00067	J	0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 18:03	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:10	03/22/17 18:03	5
Cobalt	0.014		0.0025	0.00040	mg/L		03/20/17 13:10	03/22/17 18:03	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:10	03/22/17 18:03	5
Lithium	0.010		0.0050	0.0032	mg/L		03/20/17 13:10	03/22/17 18:03	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/20/17 13:10	03/22/17 18:03	5
Selenium	0.012		0.0013	0.00024	mg/L		03/20/17 13:10	03/22/17 18:03	5
Thallium	0.00021	J	0.00050	0.000085	mg/L		03/20/17 13:10	03/22/17 18:03	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.9		0.25	0.11	mg/L		03/20/17 13:10	03/23/17 11:30	25
Calcium	260		1.3	0.63	mg/L		03/20/17 13:10	03/23/17 11:30	25

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/20/17 11:59	03/21/17 15:09	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1500		5.0	3.4	mg/L			03/20/17 13:13	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWC-11**

**Date Collected: 03/15/17 10:15**

**Date Received: 03/17/17 09:01**

**Lab Sample ID: 400-135240-16**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.1</b>		1.0	0.89	mg/L			03/17/17 22:25	1
Fluoride	<0.082		0.20	0.082	mg/L			03/17/17 22:25	1
<b>Sulfate</b>	<b>2.5</b>		1.0	0.70	mg/L			03/17/17 22:25	1

### 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		03/20/17 13:10	03/22/17 18:08	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:10	03/22/17 18:08	5
<b>Barium</b>	<b>0.032</b>		0.0025	0.00049	mg/L		03/20/17 13:10	03/22/17 18:08	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 18:08	5
<b>Boron</b>	<b>0.058</b>		0.050	0.021	mg/L		03/20/17 13:10	03/22/17 18:08	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 18:08	5
<b>Calcium</b>	<b>3.8</b>		0.25	0.13	mg/L		03/20/17 13:10	03/22/17 18:08	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:10	03/22/17 18:08	5
<b>Cobalt</b>	<b>0.00064</b>	<b>J</b>	0.0025	0.00040	mg/L		03/20/17 13:10	03/22/17 18:08	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:10	03/22/17 18:08	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/20/17 13:10	03/22/17 18:08	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/20/17 13:10	03/22/17 18:08	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/20/17 13:10	03/22/17 18:08	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:10	03/22/17 18:08	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		03/20/17 11:59	03/21/17 15:10	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>54</b>		5.0	3.4	mg/L			03/20/17 14:06	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWC-19**

**Date Collected: 03/15/17 10:20**

**Date Received: 03/17/17 09:01**

**Lab Sample ID: 400-135240-17**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.4		1.0	0.89	mg/L			03/17/17 22:48	1
Fluoride	0.37		0.20	0.082	mg/L			03/17/17 22:48	1
Sulfate	3.6		1.0	0.70	mg/L			03/17/17 22:48	1

### 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		03/20/17 13:10	03/22/17 18:12	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:10	03/22/17 18:12	5
Barium	0.0015	J	0.0025	0.00049	mg/L		03/20/17 13:10	03/22/17 18:12	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 18:12	5
Boron	0.034	J	0.050	0.021	mg/L		03/20/17 13:10	03/22/17 18:12	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 18:12	5
Calcium	10		0.25	0.13	mg/L		03/20/17 13:10	03/22/17 18:12	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:10	03/22/17 18:12	5
Cobalt	0.00045	J	0.0025	0.00040	mg/L		03/20/17 13:10	03/22/17 18:12	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:10	03/22/17 18:12	5
Lithium	0.052		0.0050	0.0032	mg/L		03/20/17 13:10	03/22/17 18:12	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/20/17 13:10	03/22/17 18:12	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/20/17 13:10	03/22/17 18:12	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:10	03/22/17 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		03/20/17 11:59	03/21/17 15:11	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	120		5.0	3.4	mg/L			03/20/17 14:06	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-135240-18**

**Date Collected: 03/15/17 11:20**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	38		1.0	0.89	mg/L			03/17/17 23:11	1
Fluoride	0.25		0.20	0.082	mg/L			03/17/17 23:11	1
Sulfate	170		5.0	3.5	mg/L			03/20/17 15:39	5

### 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		03/20/17 13:10	03/22/17 18:17	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:10	03/22/17 18:17	5
Barium	0.0013	J	0.0025	0.00049	mg/L		03/20/17 13:10	03/22/17 18:17	5
Beryllium	0.0016	J	0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 18:17	5
Boron	1.7		0.050	0.021	mg/L		03/20/17 13:10	03/22/17 18:17	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 18:17	5
Calcium	38		0.25	0.13	mg/L		03/20/17 13:10	03/22/17 18:17	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:10	03/22/17 18:17	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/20/17 13:10	03/22/17 18:17	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:10	03/22/17 18:17	5
Lithium	0.014		0.0050	0.0032	mg/L		03/20/17 13:10	03/22/17 18:17	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/20/17 13:10	03/22/17 18:17	5
Selenium	0.0030		0.0013	0.00024	mg/L		03/20/17 13:10	03/22/17 18:17	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:10	03/22/17 18:17	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		03/20/17 12:33	03/23/17 14:50	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	370		5.0	3.4	mg/L			03/20/17 14:06	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWC-10**

**Date Collected: 03/15/17 11:50**

**Date Received: 03/17/17 09:01**

**Lab Sample ID: 400-135240-19**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4		1.0	0.89	mg/L			03/18/17 00:19	1
Fluoride	0.16	J	0.20	0.082	mg/L			03/18/17 00:19	1
Sulfate	2.7		1.0	0.70	mg/L			03/18/17 00:19	1

### 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		03/20/17 13:10	03/22/17 18:21	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:10	03/22/17 18:21	5
Barium	0.040		0.0025	0.00049	mg/L		03/20/17 13:10	03/22/17 18:21	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 18:21	5
Boron	0.032	J	0.050	0.021	mg/L		03/20/17 13:10	03/22/17 18:21	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 18:21	5
Calcium	9.0		0.25	0.13	mg/L		03/20/17 13:10	03/22/17 18:21	5
Chromium	0.0015	J	0.0025	0.0011	mg/L		03/20/17 13:10	03/22/17 18:21	5
Cobalt	0.00062	J	0.0025	0.00040	mg/L		03/20/17 13:10	03/22/17 18:21	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:10	03/22/17 18:21	5
Lithium	0.014		0.0050	0.0032	mg/L		03/20/17 13:10	03/22/17 18:21	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/20/17 13:10	03/22/17 18:21	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/20/17 13:10	03/22/17 18:21	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:10	03/22/17 18:21	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		03/20/17 12:33	03/23/17 15:05	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	78		5.0	3.4	mg/L			03/20/17 14:06	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-135240-20**

**Date Collected: 03/15/17 11:55**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.2</b>		1.0	0.89	mg/L			03/18/17 00:42	1
Fluoride	<0.082		0.20	0.082	mg/L			03/18/17 00:42	1
<b>Sulfate</b>	<b>17</b>		1.0	0.70	mg/L			03/18/17 00:42	1

**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		03/20/17 13:10	03/22/17 18:26	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:10	03/22/17 18:26	5
<b>Barium</b>	<b>0.024</b>		0.0025	0.00049	mg/L		03/20/17 13:10	03/22/17 18:26	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 18:26	5
<b>Boron</b>	<b>0.024</b>	<b>J</b>	0.050	0.021	mg/L		03/20/17 13:10	03/22/17 18:26	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 18:26	5
<b>Calcium</b>	<b>16</b>		0.25	0.13	mg/L		03/20/17 13:10	03/22/17 18:26	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:10	03/22/17 18:26	5
<b>Cobalt</b>	<b>0.0016</b>	<b>J</b>	0.0025	0.00040	mg/L		03/20/17 13:10	03/22/17 18:26	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:10	03/22/17 18:26	5
<b>Lithium</b>	<b>0.0077</b>		0.0050	0.0032	mg/L		03/20/17 13:10	03/22/17 18:26	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/20/17 13:10	03/22/17 18:26	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/20/17 13:10	03/22/17 18:26	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:10	03/22/17 18:26	5

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.00018</b>	<b>J B</b>	0.00020	0.000070	mg/L		03/20/17 12:33	03/23/17 15:07	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>120</b>		5.0	3.4	mg/L			03/20/17 14:06	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-135240-21**

Date Collected: 03/15/17 14:35

Matrix: Water

Date Received: 03/17/17 09:01

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.3		1.0	0.89	mg/L			03/18/17 01:05	1
Fluoride	1.3		0.20	0.082	mg/L			03/18/17 01:05	1
Sulfate	44		1.0	0.70	mg/L			03/18/17 01:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0011	J	0.0025	0.0010	mg/L		03/20/17 13:18	03/21/17 15:32	5
Arsenic	0.00047	J	0.0013	0.00046	mg/L		03/20/17 13:18	03/21/17 15:32	5
Barium	0.00054	J	0.0025	0.00049	mg/L		03/20/17 13:18	03/21/17 15:32	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:18	03/21/17 15:32	5
Boron	0.42		0.050	0.021	mg/L		03/20/17 13:18	03/21/17 15:32	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:18	03/21/17 15:32	5
Calcium	8.6		0.25	0.13	mg/L		03/20/17 13:18	03/21/17 15:32	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:18	03/21/17 15:32	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/20/17 13:18	03/21/17 15:32	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:18	03/21/17 15:32	5
Lithium	0.035		0.0050	0.0032	mg/L		03/20/17 13:18	03/21/17 15:32	5
Molybdenum	0.0057	J	0.015	0.00085	mg/L		03/20/17 13:18	03/21/17 15:32	5
Selenium	0.0031		0.0013	0.00024	mg/L		03/20/17 13:18	03/21/17 15:32	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:18	03/21/17 15:32	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		03/20/17 12:33	03/23/17 15:08	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	160		5.0	3.4	mg/L			03/20/17 14:06	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: FB-2**  
**Date Collected: 03/15/17 09:35**  
**Date Received: 03/17/17 09:01**

**Lab Sample ID: 400-135240-22**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			03/18/17 01:28	1
Fluoride	<0.082		0.20	0.082	mg/L			03/18/17 01:28	1
Sulfate	<0.70		1.0	0.70	mg/L			03/18/17 01:28	1

### 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		03/20/17 13:18	03/21/17 15:37	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:18	03/21/17 15:37	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/20/17 13:18	03/21/17 15:37	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:18	03/21/17 15:37	5
Boron	<0.021		0.050	0.021	mg/L		03/20/17 13:18	03/21/17 15:37	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:18	03/21/17 15:37	5
Calcium	<0.13		0.25	0.13	mg/L		03/20/17 13:18	03/21/17 15:37	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:18	03/21/17 15:37	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/20/17 13:18	03/21/17 15:37	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:18	03/21/17 15:37	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/20/17 13:18	03/21/17 15:37	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/20/17 13:18	03/21/17 15:37	5
<b>Selenium</b>	<b>0.00030</b>	<b>J</b>	0.0013	0.00024	mg/L		03/20/17 13:18	03/21/17 15:37	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:18	03/21/17 15:37	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.00014</b>	<b>J B</b>	0.00020	0.000070	mg/L		03/20/17 12:33	03/23/17 15:09	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			03/20/17 14:06	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: FERB-2**  
**Date Collected: 03/15/17 11:00**  
**Date Received: 03/17/17 09:01**

**Lab Sample ID: 400-135240-23**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			03/18/17 01:51	1
Fluoride	<0.082		0.20	0.082	mg/L			03/18/17 01:51	1
Sulfate	<0.70		1.0	0.70	mg/L			03/18/17 01:51	1

### 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		03/20/17 13:18	03/21/17 15:41	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:18	03/21/17 15:41	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/20/17 13:18	03/21/17 15:41	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:18	03/21/17 15:41	5
Boron	<0.021		0.050	0.021	mg/L		03/20/17 13:18	03/21/17 15:41	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:18	03/21/17 15:41	5
Calcium	<0.13		0.25	0.13	mg/L		03/20/17 13:18	03/21/17 15:41	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:18	03/21/17 15:41	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/20/17 13:18	03/21/17 15:41	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:18	03/21/17 15:41	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/20/17 13:18	03/21/17 15:41	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/20/17 13:18	03/21/17 15:41	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/20/17 13:18	03/21/17 15:41	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:18	03/21/17 15:41	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		03/20/17 12:33	03/23/17 15:10	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			03/20/17 14:06	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: DUP-2**

**Date Collected: 03/15/17 00:00**

**Date Received: 03/17/17 09:01**

**Lab Sample ID: 400-135240-24**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.4		1.0	0.89	mg/L			03/18/17 02:14	1
Fluoride	0.38		0.20	0.082	mg/L			03/18/17 02:14	1
Sulfate	3.7		1.0	0.70	mg/L			03/18/17 02:14	1

### 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		03/20/17 13:18	03/21/17 15:46	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:18	03/21/17 15:46	5
Barium	0.0015	J	0.0025	0.00049	mg/L		03/20/17 13:18	03/21/17 15:46	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:18	03/21/17 15:46	5
Boron	<0.021		0.050	0.021	mg/L		03/20/17 13:18	03/21/17 15:46	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:18	03/21/17 15:46	5
Calcium	11		0.25	0.13	mg/L		03/20/17 13:18	03/21/17 15:46	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:18	03/21/17 15:46	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/20/17 13:18	03/21/17 15:46	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:18	03/21/17 15:46	5
Lithium	0.052		0.0050	0.0032	mg/L		03/20/17 13:18	03/21/17 15:46	5
Molybdenum	0.0017	J	0.015	0.00085	mg/L		03/20/17 13:18	03/21/17 15:46	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/20/17 13:18	03/21/17 15:46	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:18	03/21/17 15:46	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00014	J B	0.00020	0.000070	mg/L		03/20/17 12:33	03/23/17 15:12	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	110		5.0	3.4	mg/L			03/19/17 12:47	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Lab Sample ID: 400-135240-26**

Date Collected: 03/17/17 10:00

Matrix: Water

Date Received: 03/18/17 09:51

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>4.8</b>		1.0	0.89	mg/L			03/20/17 16:01	1
Fluoride	<0.082		0.20	0.082	mg/L			03/20/17 16:01	1
<b>Sulfate</b>	<b>22</b>		1.0	0.70	mg/L			03/20/17 16:01	1

### 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		03/21/17 13:03	03/23/17 14:03	5
<b>Arsenic</b>	<b>0.00060</b>	<b>J</b>	0.0013	0.00046	mg/L		03/21/17 13:03	03/23/17 14:03	5
<b>Barium</b>	<b>0.046</b>		0.0025	0.00049	mg/L		03/21/17 13:03	03/23/17 14:03	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/21/17 13:03	03/23/17 14:03	5
Boron	<0.021		0.050	0.021	mg/L		03/21/17 13:03	03/23/17 14:03	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/21/17 13:03	03/23/17 14:03	5
<b>Calcium</b>	<b>2.4</b>		0.25	0.13	mg/L		03/21/17 13:03	03/23/17 14:03	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/21/17 13:03	03/23/17 14:03	5
<b>Cobalt</b>	<b>0.013</b>		0.0025	0.00040	mg/L		03/21/17 13:03	03/23/17 14:03	5
Lead	<0.00035	<sup>^</sup>	0.0013	0.00035	mg/L		03/21/17 13:03	03/23/17 14:03	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/21/17 13:03	03/23/17 14:03	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/21/17 13:03	03/23/17 14:03	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/21/17 13:03	03/23/17 14:03	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/21/17 13:03	03/23/17 14:03	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.00013</b>	<b>J B</b>	0.00020	0.000070	mg/L		03/20/17 15:43	03/23/17 15:15	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>56</b>		5.0	3.4	mg/L			03/22/17 13:59	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

## Qualifiers

### HPLC/IC

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.

### Metals

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.
B	Compound was found in the blank and sample.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
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.

### 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, 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 Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWA-18**

**Date Collected: 03/14/17 10:45**

**Date Received: 03/16/17 09:09**

**Lab Sample ID: 400-135240-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345979	03/16/17 14:47	KH1	TAL PEN
Total Recoverable	Prep	3005A			346432	03/20/17 13:10	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346822	03/22/17 16:06	DRE	TAL PEN
Total/NA	Prep	7470A			346424	03/20/17 11:59	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346608	03/21/17 14:38	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346309	03/19/17 12:47	RRC	TAL PEN

**Client Sample ID: WGWA-7**

**Date Collected: 03/14/17 10:50**

**Date Received: 03/16/17 09:09**

**Lab Sample ID: 400-135240-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345979	03/16/17 15:10	KH1	TAL PEN
Total Recoverable	Prep	3005A			346432	03/20/17 13:10	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346822	03/22/17 16:11	DRE	TAL PEN
Total/NA	Prep	7470A			346424	03/20/17 11:59	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346608	03/21/17 14:43	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346309	03/19/17 12:47	RRC	TAL PEN

**Client Sample ID: WGWA-3**

**Date Collected: 03/14/17 12:15**

**Date Received: 03/16/17 09:09**

**Lab Sample ID: 400-135240-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345979	03/16/17 15:33	KH1	TAL PEN
Total Recoverable	Prep	3005A			346432	03/20/17 13:10	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346822	03/22/17 16:51	DRE	TAL PEN
Total/NA	Prep	7470A			346424	03/20/17 11:59	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346608	03/21/17 14:45	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346309	03/19/17 12:47	RRC	TAL PEN

**Client Sample ID: WGWA-4**

**Date Collected: 03/14/17 12:15**

**Date Received: 03/16/17 09:09**

**Lab Sample ID: 400-135240-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345979	03/16/17 16:41	KH1	TAL PEN
Total Recoverable	Prep	3005A			346432	03/20/17 13:10	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346822	03/22/17 16:56	DRE	TAL PEN
Total/NA	Prep	7470A			346424	03/20/17 11:59	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346608	03/21/17 14:46	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346309	03/19/17 12:47	RRC	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWA-5**

**Lab Sample ID: 400-135240-5**

**Date Collected: 03/14/17 12:40**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345979	03/16/17 17:04	KH1	TAL PEN
Total Recoverable	Prep	3005A			346432	03/20/17 13:10	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346822	03/22/17 17:00	DRE	TAL PEN
Total/NA	Prep	7470A			346424	03/20/17 11:59	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346608	03/21/17 14:48	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346309	03/19/17 12:47	RRC	TAL PEN

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-135240-6**

**Date Collected: 03/14/17 14:15**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345979	03/16/17 17:27	KH1	TAL PEN
Total Recoverable	Prep	3005A			346432	03/20/17 13:10	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346822	03/22/17 17:05	DRE	TAL PEN
Total/NA	Prep	7470A			346424	03/20/17 11:59	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346608	03/21/17 14:49	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346309	03/19/17 12:47	RRC	TAL PEN

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-135240-7**

**Date Collected: 03/14/17 14:41**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345979	03/16/17 17:50	KH1	TAL PEN
Total Recoverable	Prep	3005A			346432	03/20/17 13:10	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346822	03/22/17 17:09	DRE	TAL PEN
Total/NA	Prep	7470A			346424	03/20/17 11:59	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346608	03/21/17 14:50	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346309	03/19/17 12:47	RRC	TAL PEN

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-135240-8**

**Date Collected: 03/14/17 14:50**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345979	03/16/17 18:12	KH1	TAL PEN
Total Recoverable	Prep	3005A			346432	03/20/17 13:10	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346822	03/22/17 17:14	DRE	TAL PEN
Total/NA	Prep	7470A			346424	03/20/17 11:59	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346608	03/21/17 15:00	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346309	03/19/17 12:47	RRC	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: FB-1**

**Lab Sample ID: 400-135240-9**

**Date Collected: 03/14/17 12:10**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345979	03/16/17 18:35	KH1	TAL PEN
Total Recoverable	Prep	3005A			346432	03/20/17 13:10	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346822	03/22/17 17:18	DRE	TAL PEN
Total/NA	Prep	7470A			346424	03/20/17 11:59	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346608	03/21/17 15:02	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346309	03/19/17 12:47	RRC	TAL PEN

**Client Sample ID: FERB-1**

**Lab Sample ID: 400-135240-10**

**Date Collected: 03/14/17 12:30**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345979	03/16/17 19:21	KH1	TAL PEN
Total Recoverable	Prep	3005A			346432	03/20/17 13:10	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346822	03/22/17 17:23	DRE	TAL PEN
Total/NA	Prep	7470A			346424	03/20/17 11:59	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346608	03/21/17 15:03	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346309	03/19/17 12:47	RRC	TAL PEN

**Client Sample ID: DUP-1**

**Lab Sample ID: 400-135240-11**

**Date Collected: 03/14/17 00:00**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345979	03/16/17 19:44	KH1	TAL PEN
Total Recoverable	Prep	3005A			346432	03/20/17 13:10	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346822	03/22/17 17:45	DRE	TAL PEN
Total/NA	Prep	7470A			346424	03/20/17 11:59	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346608	03/21/17 15:04	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346308	03/19/17 11:56	RRC	TAL PEN

**Client Sample ID: WGWA-1**

**Lab Sample ID: 400-135240-12**

**Date Collected: 03/13/17 15:50**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345979	03/16/17 20:06	KH1	TAL PEN
Total Recoverable	Prep	3005A			346432	03/20/17 13:10	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346822	03/22/17 17:50	DRE	TAL PEN
Total/NA	Prep	7470A			346424	03/20/17 11:59	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346608	03/21/17 15:05	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346308	03/19/17 11:56	RRC	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWA-2**

**Lab Sample ID: 400-135240-13**

**Date Collected: 03/13/17 16:05**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345979	03/16/17 21:15	KH1	TAL PEN
Total Recoverable	Prep	3005A			346432	03/20/17 13:10	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346822	03/22/17 17:54	DRE	TAL PEN
Total/NA	Prep	7470A			346424	03/20/17 11:59	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346608	03/21/17 15:06	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346308	03/19/17 11:56	RRC	TAL PEN

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-135240-14**

**Date Collected: 03/15/17 09:20**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	346204	03/17/17 20:54	TAJ	TAL PEN
Total Recoverable	Prep	3005A			346432	03/20/17 13:10	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346822	03/22/17 17:59	DRE	TAL PEN
Total/NA	Prep	7470A			346424	03/20/17 11:59	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346608	03/21/17 15:08	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346356	03/20/17 13:13	RRC	TAL PEN

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-135240-15**

**Date Collected: 03/15/17 10:05**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	346204	03/17/17 22:03	TAJ	TAL PEN
Total/NA	Analysis	300.0		10	346459	03/20/17 15:09	KH1	TAL PEN
Total/NA	Analysis	300.0		20	346459	03/20/17 22:06	KH1	TAL PEN
Total Recoverable	Prep	3005A			346432	03/20/17 13:10	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346822	03/22/17 18:03	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		346432	03/20/17 13:10	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	347015	03/23/17 11:30	DRE	TAL PEN
Total/NA	Prep	7470A			346424	03/20/17 11:59	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346608	03/21/17 15:09	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346356	03/20/17 13:13	RRC	TAL PEN

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-135240-16**

**Date Collected: 03/15/17 10:15**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	346204	03/17/17 22:25	TAJ	TAL PEN
Total Recoverable	Prep	3005A			346432	03/20/17 13:10	DRE	TAL PEN

TestAmerica Pensacola



# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-135240-16**

**Date Collected: 03/15/17 10:15**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020		5	346822	03/22/17 18:08	DRE	TAL PEN
Total/NA	Prep	7470A			346424	03/20/17 11:59	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346608	03/21/17 15:10	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346357	03/20/17 14:06	RRC	TAL PEN

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-135240-17**

**Date Collected: 03/15/17 10:20**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	346204	03/17/17 22:48	TAJ	TAL PEN
Total Recoverable	Prep	3005A			346432	03/20/17 13:10	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346822	03/22/17 18:12	DRE	TAL PEN
Total/NA	Prep	7470A			346424	03/20/17 11:59	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346608	03/21/17 15:11	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346357	03/20/17 14:06	RRC	TAL PEN

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-135240-18**

**Date Collected: 03/15/17 11:20**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	346204	03/17/17 23:11	TAJ	TAL PEN
Total/NA	Analysis	300.0		5	346459	03/20/17 15:39	KH1	TAL PEN
Total Recoverable	Prep	3005A			346432	03/20/17 13:10	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346822	03/22/17 18:17	DRE	TAL PEN
Total/NA	Prep	7470A			346429	03/20/17 12:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346931	03/23/17 14:50	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346357	03/20/17 14:06	RRC	TAL PEN

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-135240-19**

**Date Collected: 03/15/17 11:50**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	346204	03/18/17 00:19	TAJ	TAL PEN
Total Recoverable	Prep	3005A			346432	03/20/17 13:10	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346822	03/22/17 18:21	DRE	TAL PEN
Total/NA	Prep	7470A			346429	03/20/17 12:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346931	03/23/17 15:05	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346357	03/20/17 14:06	RRC	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-135240-20**

**Date Collected: 03/15/17 11:55**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	346204	03/18/17 00:42	TAJ	TAL PEN
Total Recoverable	Prep	3005A			346432	03/20/17 13:10	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346822	03/22/17 18:26	DRE	TAL PEN
Total/NA	Prep	7470A			346429	03/20/17 12:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346931	03/23/17 15:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346357	03/20/17 14:06	RRC	TAL PEN

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-135240-21**

**Date Collected: 03/15/17 14:35**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	346204	03/18/17 01:05	TAJ	TAL PEN
Total Recoverable	Prep	3005A			346437	03/20/17 13:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346660	03/21/17 15:32	DRE	TAL PEN
Total/NA	Prep	7470A			346429	03/20/17 12:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346931	03/23/17 15:08	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346357	03/20/17 14:06	RRC	TAL PEN

**Client Sample ID: FB-2**

**Lab Sample ID: 400-135240-22**

**Date Collected: 03/15/17 09:35**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	346204	03/18/17 01:28	TAJ	TAL PEN
Total Recoverable	Prep	3005A			346437	03/20/17 13:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346660	03/21/17 15:37	DRE	TAL PEN
Total/NA	Prep	7470A			346429	03/20/17 12:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346931	03/23/17 15:09	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346357	03/20/17 14:06	RRC	TAL PEN

**Client Sample ID: FERB-2**

**Lab Sample ID: 400-135240-23**

**Date Collected: 03/15/17 11:00**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	346204	03/18/17 01:51	TAJ	TAL PEN
Total Recoverable	Prep	3005A			346437	03/20/17 13:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346660	03/21/17 15:41	DRE	TAL PEN
Total/NA	Prep	7470A			346429	03/20/17 12:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346931	03/23/17 15:10	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346357	03/20/17 14:06	RRC	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Client Sample ID: DUP-2**

**Lab Sample ID: 400-135240-24**

**Date Collected: 03/15/17 00:00**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	346204	03/18/17 02:14	TAJ	TAL PEN
Total Recoverable	Prep	3005A			346437	03/20/17 13:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	346660	03/21/17 15:46	DRE	TAL PEN
Total/NA	Prep	7470A			346429	03/20/17 12:33	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346931	03/23/17 15:12	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346309	03/19/17 12:47	RRC	TAL PEN

**Client Sample ID: WGWC-14A**

**Lab Sample ID: 400-135240-26**

**Date Collected: 03/17/17 10:00**

**Matrix: Water**

**Date Received: 03/18/17 09:51**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	346459	03/20/17 16:01	KH1	TAL PEN
Total Recoverable	Prep	3005A			346573	03/21/17 13:03	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	347015	03/23/17 14:03	DRE	TAL PEN
Total/NA	Prep	7470A			346429	03/20/17 15:43	JAP	TAL PEN
Total/NA	Analysis	7470A		1	346931	03/23/17 15:15	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	346671	03/22/17 13:59	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 Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

## HPLC/IC

### Analysis Batch: 345979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-1	WGWA-18	Total/NA	Water	300.0	
400-135240-2	WGWA-7	Total/NA	Water	300.0	
400-135240-3	WGWA-3	Total/NA	Water	300.0	
400-135240-4	WGWA-4	Total/NA	Water	300.0	
400-135240-5	WGWA-5	Total/NA	Water	300.0	
400-135240-6	WGWC-17	Total/NA	Water	300.0	
400-135240-7	WGWA-6	Total/NA	Water	300.0	
400-135240-8	WGWA-15	Total/NA	Water	300.0	
400-135240-9	FB-1	Total/NA	Water	300.0	
400-135240-10	FERB-1	Total/NA	Water	300.0	
400-135240-11	DUP-1	Total/NA	Water	300.0	
400-135240-12	WGWA-1	Total/NA	Water	300.0	
400-135240-13	WGWA-2	Total/NA	Water	300.0	
MB 400-345979/4	Method Blank	Total/NA	Water	300.0	
LCS 400-345979/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-345979/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-135231-A-4 MS	Matrix Spike	Total/NA	Water	300.0	
400-135231-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 346204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-14	WGWC-13	Total/NA	Water	300.0	
400-135240-15	WGWC-16	Total/NA	Water	300.0	
400-135240-16	WGWC-11	Total/NA	Water	300.0	
400-135240-17	WGWC-19	Total/NA	Water	300.0	
400-135240-18	WGWC-8	Total/NA	Water	300.0	
400-135240-19	WGWC-10	Total/NA	Water	300.0	
400-135240-20	WGWC-12	Total/NA	Water	300.0	
400-135240-21	WGWC-9	Total/NA	Water	300.0	
400-135240-22	FB-2	Total/NA	Water	300.0	
400-135240-23	FERB-2	Total/NA	Water	300.0	
400-135240-24	DUP-2	Total/NA	Water	300.0	
MB 400-346204/28	Method Blank	Total/NA	Water	300.0	
LCS 400-346204/29	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-346204/30	Lab Control Sample Dup	Total/NA	Water	300.0	
400-135240-14 MS	WGWC-13	Total/NA	Water	300.0	
400-135240-14 MSD	WGWC-13	Total/NA	Water	300.0	

### Analysis Batch: 346459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-15	WGWC-16	Total/NA	Water	300.0	
400-135240-15	WGWC-16	Total/NA	Water	300.0	
400-135240-18	WGWC-8	Total/NA	Water	300.0	
400-135240-26	WGWC-14A	Total/NA	Water	300.0	
MB 400-346459/4	Method Blank	Total/NA	Water	300.0	
LCS 400-346459/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-346459/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-135298-D-4 MS	Matrix Spike	Total/NA	Water	300.0	
400-135298-D-4 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

## Metals

### Prep Batch: 346424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-1	WGWA-18	Total/NA	Water	7470A	
400-135240-2	WGWA-7	Total/NA	Water	7470A	
400-135240-3	WGWA-3	Total/NA	Water	7470A	
400-135240-4	WGWA-4	Total/NA	Water	7470A	
400-135240-5	WGWA-5	Total/NA	Water	7470A	
400-135240-6	WGWC-17	Total/NA	Water	7470A	
400-135240-7	WGWA-6	Total/NA	Water	7470A	
400-135240-8	WGWA-15	Total/NA	Water	7470A	
400-135240-9	FB-1	Total/NA	Water	7470A	
400-135240-10	FERB-1	Total/NA	Water	7470A	
400-135240-11	DUP-1	Total/NA	Water	7470A	
400-135240-12	WGWA-1	Total/NA	Water	7470A	
400-135240-13	WGWA-2	Total/NA	Water	7470A	
400-135240-14	WGWC-13	Total/NA	Water	7470A	
400-135240-15	WGWC-16	Total/NA	Water	7470A	
400-135240-16	WGWC-11	Total/NA	Water	7470A	
400-135240-17	WGWC-19	Total/NA	Water	7470A	
MB 400-346424/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-346424/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-135240-1 MS	WGWA-18	Total/NA	Water	7470A	
400-135240-1 MSD	WGWA-18	Total/NA	Water	7470A	

### Prep Batch: 346429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-18	WGWC-8	Total/NA	Water	7470A	
400-135240-19	WGWC-10	Total/NA	Water	7470A	
400-135240-20	WGWC-12	Total/NA	Water	7470A	
400-135240-21	WGWC-9	Total/NA	Water	7470A	
400-135240-22	FB-2	Total/NA	Water	7470A	
400-135240-23	FERB-2	Total/NA	Water	7470A	
400-135240-24	DUP-2	Total/NA	Water	7470A	
400-135240-26	WGWC-14A	Total/NA	Water	7470A	
MB 400-346429/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-346429/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-135240-18 MS	WGWC-8	Total/NA	Water	7470A	
400-135240-18 MSD	WGWC-8	Total/NA	Water	7470A	

### Prep Batch: 346432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-1	WGWA-18	Total Recoverable	Water	3005A	
400-135240-2	WGWA-7	Total Recoverable	Water	3005A	
400-135240-3	WGWA-3	Total Recoverable	Water	3005A	
400-135240-4	WGWA-4	Total Recoverable	Water	3005A	
400-135240-5	WGWA-5	Total Recoverable	Water	3005A	
400-135240-6	WGWC-17	Total Recoverable	Water	3005A	
400-135240-7	WGWA-6	Total Recoverable	Water	3005A	
400-135240-8	WGWC-15	Total Recoverable	Water	3005A	
400-135240-9	FB-1	Total Recoverable	Water	3005A	
400-135240-10	FERB-1	Total Recoverable	Water	3005A	
400-135240-11	DUP-1	Total Recoverable	Water	3005A	
400-135240-12	WGWA-1	Total Recoverable	Water	3005A	

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

## Metals (Continued)

### Prep Batch: 346432 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-13	WGWA-2	Total Recoverable	Water	3005A	
400-135240-14	WGWC-13	Total Recoverable	Water	3005A	
400-135240-15 - DL	WGWC-16	Total Recoverable	Water	3005A	
400-135240-15	WGWC-16	Total Recoverable	Water	3005A	
400-135240-16	WGWC-11	Total Recoverable	Water	3005A	
400-135240-17	WGWC-19	Total Recoverable	Water	3005A	
400-135240-18	WGWC-8	Total Recoverable	Water	3005A	
400-135240-19	WGWC-10	Total Recoverable	Water	3005A	
400-135240-20	WGWC-12	Total Recoverable	Water	3005A	
MB 400-346432/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-346432/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-135240-2 MS	WGWA-7	Total Recoverable	Water	3005A	
400-135240-2 MSD	WGWA-7	Total Recoverable	Water	3005A	

### Prep Batch: 346437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-21	WGWC-9	Total Recoverable	Water	3005A	
400-135240-22	FB-2	Total Recoverable	Water	3005A	
400-135240-23	FERB-2	Total Recoverable	Water	3005A	
400-135240-24	DUP-2	Total Recoverable	Water	3005A	
MB 400-346437/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-346437/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-135244-B-11-F MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-135244-B-11-G MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Prep Batch: 346573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-26	WGWC-14A	Total Recoverable	Water	3005A	
MB 400-346573/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-346573/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-135255-B-2-C MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-135255-B-2-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Analysis Batch: 346608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-1	WGWA-18	Total/NA	Water	7470A	346424
400-135240-2	WGWA-7	Total/NA	Water	7470A	346424
400-135240-3	WGWA-3	Total/NA	Water	7470A	346424
400-135240-4	WGWA-4	Total/NA	Water	7470A	346424
400-135240-5	WGWA-5	Total/NA	Water	7470A	346424
400-135240-6	WGWC-17	Total/NA	Water	7470A	346424
400-135240-7	WGWA-6	Total/NA	Water	7470A	346424
400-135240-8	WGWC-15	Total/NA	Water	7470A	346424
400-135240-9	FB-1	Total/NA	Water	7470A	346424
400-135240-10	FERB-1	Total/NA	Water	7470A	346424
400-135240-11	DUP-1	Total/NA	Water	7470A	346424
400-135240-12	WGWA-1	Total/NA	Water	7470A	346424
400-135240-13	WGWA-2	Total/NA	Water	7470A	346424
400-135240-14	WGWC-13	Total/NA	Water	7470A	346424
400-135240-15	WGWC-16	Total/NA	Water	7470A	346424
400-135240-16	WGWC-11	Total/NA	Water	7470A	346424

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

## Metals (Continued)

### Analysis Batch: 346608 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-17	WGWC-19	Total/NA	Water	7470A	346424
MB 400-346424/14-A	Method Blank	Total/NA	Water	7470A	346424
LCS 400-346424/15-A	Lab Control Sample	Total/NA	Water	7470A	346424
400-135240-1 MS	WGWA-18	Total/NA	Water	7470A	346424
400-135240-1 MSD	WGWA-18	Total/NA	Water	7470A	346424

### Analysis Batch: 346660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-21	WGWC-9	Total Recoverable	Water	6020	346437
400-135240-22	FB-2	Total Recoverable	Water	6020	346437
400-135240-23	FERB-2	Total Recoverable	Water	6020	346437
400-135240-24	DUP-2	Total Recoverable	Water	6020	346437
MB 400-346437/1-A ^5	Method Blank	Total Recoverable	Water	6020	346437
LCS 400-346437/2-A	Lab Control Sample	Total Recoverable	Water	6020	346437
400-135244-B-11-F MS ^5	Matrix Spike	Total Recoverable	Water	6020	346437
400-135244-B-11-G MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	346437

### Analysis Batch: 346822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-1	WGWA-18	Total Recoverable	Water	6020	346432
400-135240-2	WGWA-7	Total Recoverable	Water	6020	346432
400-135240-3	WGWA-3	Total Recoverable	Water	6020	346432
400-135240-4	WGWA-4	Total Recoverable	Water	6020	346432
400-135240-5	WGWA-5	Total Recoverable	Water	6020	346432
400-135240-6	WGWC-17	Total Recoverable	Water	6020	346432
400-135240-7	WGWA-6	Total Recoverable	Water	6020	346432
400-135240-8	WGWC-15	Total Recoverable	Water	6020	346432
400-135240-9	FB-1	Total Recoverable	Water	6020	346432
400-135240-10	FERB-1	Total Recoverable	Water	6020	346432
400-135240-11	DUP-1	Total Recoverable	Water	6020	346432
400-135240-12	WGWA-1	Total Recoverable	Water	6020	346432
400-135240-13	WGWA-2	Total Recoverable	Water	6020	346432
400-135240-14	WGWC-13	Total Recoverable	Water	6020	346432
400-135240-15	WGWC-16	Total Recoverable	Water	6020	346432
400-135240-16	WGWC-11	Total Recoverable	Water	6020	346432
400-135240-17	WGWC-19	Total Recoverable	Water	6020	346432
400-135240-18	WGWC-8	Total Recoverable	Water	6020	346432
400-135240-19	WGWC-10	Total Recoverable	Water	6020	346432
400-135240-20	WGWC-12	Total Recoverable	Water	6020	346432
MB 400-346432/1-A ^5	Method Blank	Total Recoverable	Water	6020	346432
LCS 400-346432/2-A	Lab Control Sample	Total Recoverable	Water	6020	346432
400-135240-2 MS	WGWA-7	Total Recoverable	Water	6020	346432
400-135240-2 MSD	WGWA-7	Total Recoverable	Water	6020	346432

### Analysis Batch: 346931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-18	WGWC-8	Total/NA	Water	7470A	346429
400-135240-19	WGWC-10	Total/NA	Water	7470A	346429
400-135240-20	WGWC-12	Total/NA	Water	7470A	346429
400-135240-21	WGWC-9	Total/NA	Water	7470A	346429
400-135240-22	FB-2	Total/NA	Water	7470A	346429

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

## Metals (Continued)

### Analysis Batch: 346931 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-23	FERB-2	Total/NA	Water	7470A	346429
400-135240-24	DUP-2	Total/NA	Water	7470A	346429
400-135240-26	WGWC-14A	Total/NA	Water	7470A	346429
MB 400-346429/14-A	Method Blank	Total/NA	Water	7470A	346429
LCS 400-346429/15-A	Lab Control Sample	Total/NA	Water	7470A	346429
400-135240-18 MS	WGWC-8	Total/NA	Water	7470A	346429
400-135240-18 MSD	WGWC-8	Total/NA	Water	7470A	346429

### Analysis Batch: 347015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-15 - DL	WGWC-16	Total Recoverable	Water	6020	346432
400-135240-26	WGWC-14A	Total Recoverable	Water	6020	346573
MB 400-346573/1-A ^5	Method Blank	Total Recoverable	Water	6020	346573
LCS 400-346573/2-A	Lab Control Sample	Total Recoverable	Water	6020	346573
400-135255-B-2-C MS ^5	Matrix Spike	Total Recoverable	Water	6020	346573
400-135255-B-2-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	346573

## General Chemistry

### Analysis Batch: 346308

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-11	DUP-1	Total/NA	Water	SM 2540C	
400-135240-12	WGWA-1	Total/NA	Water	SM 2540C	
400-135240-13	WGWA-2	Total/NA	Water	SM 2540C	
MB 400-346308/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-346308/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-135240-12 DU	WGWA-1	Total/NA	Water	SM 2540C	

### Analysis Batch: 346309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-1	WGWA-18	Total/NA	Water	SM 2540C	
400-135240-2	WGWA-7	Total/NA	Water	SM 2540C	
400-135240-3	WGWA-3	Total/NA	Water	SM 2540C	
400-135240-4	WGWA-4	Total/NA	Water	SM 2540C	
400-135240-5	WGWA-5	Total/NA	Water	SM 2540C	
400-135240-6	WGWC-17	Total/NA	Water	SM 2540C	
400-135240-7	WGWA-6	Total/NA	Water	SM 2540C	
400-135240-8	WGWC-15	Total/NA	Water	SM 2540C	
400-135240-9	FB-1	Total/NA	Water	SM 2540C	
400-135240-10	FERB-1	Total/NA	Water	SM 2540C	
400-135240-24	DUP-2	Total/NA	Water	SM 2540C	
MB 400-346309/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-346309/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-135240-7 DU	WGWA-6	Total/NA	Water	SM 2540C	

### Analysis Batch: 346356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-14	WGWC-13	Total/NA	Water	SM 2540C	
400-135240-15	WGWC-16	Total/NA	Water	SM 2540C	
MB 400-346356/1	Method Blank	Total/NA	Water	SM 2540C	

TestAmerica Pensacola



# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

## General Chemistry (Continued)

### Analysis Batch: 346356 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-346356/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-135225-A-4 DU	Duplicate	Total/NA	Water	SM 2540C	

### Analysis Batch: 346357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-16	WGWC-11	Total/NA	Water	SM 2540C	
400-135240-17	WGWC-19	Total/NA	Water	SM 2540C	
400-135240-18	WGWC-8	Total/NA	Water	SM 2540C	
400-135240-19	WGWC-10	Total/NA	Water	SM 2540C	
400-135240-20	WGWC-12	Total/NA	Water	SM 2540C	
400-135240-21	WGWC-9	Total/NA	Water	SM 2540C	
400-135240-22	FB-2	Total/NA	Water	SM 2540C	
400-135240-23	FERB-2	Total/NA	Water	SM 2540C	
MB 400-346357/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-346357/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-135240-20 DU	WGWC-12	Total/NA	Water	SM 2540C	

### Analysis Batch: 346671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-26	WGWC-14A	Total/NA	Water	SM 2540C	
MB 400-346671/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-346671/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-135240-26 DU	WGWC-14A	Total/NA	Water	SM 2540C	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 400-345979/4**  
**Matrix: Water**  
**Analysis Batch: 345979**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			03/16/17 12:07	1
Fluoride	<0.082		0.20	0.082	mg/L			03/16/17 12:07	1
Sulfate	<0.70		1.0	0.70	mg/L			03/16/17 12:07	1

**Lab Sample ID: LCS 400-345979/5**  
**Matrix: Water**  
**Analysis Batch: 345979**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.0		mg/L		100	90 - 110
Fluoride	10.0	10.9		mg/L		109	90 - 110
Sulfate	10.0	9.98		mg/L		100	90 - 110

**Lab Sample ID: LCSD 400-345979/6**  
**Matrix: Water**  
**Analysis Batch: 345979**

**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	10.0	9.80		mg/L		98	90 - 110	2	15
Fluoride	10.0	10.6		mg/L		106	90 - 110	3	15
Sulfate	10.0	9.77		mg/L		98	90 - 110	2	15

**Lab Sample ID: 400-135231-A-4 MS**  
**Matrix: Water**  
**Analysis Batch: 345979**

**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	200	E	10.0	203	E 4	mg/L		26	80 - 120
Fluoride	<0.082		10.0	11.1		mg/L		111	80 - 120
Sulfate	330	E	10.0	336	E 4	mg/L		51	80 - 120

**Lab Sample ID: 400-135231-A-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 345979**

**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	200	E	10.0	202	E 4	mg/L		20	80 - 120	0	20
Fluoride	<0.082		10.0	11.1		mg/L		111	80 - 120	1	20
Sulfate	330	E	10.0	334	E 4	mg/L		40	80 - 120	0	20

**Lab Sample ID: MB 400-346204/28**  
**Matrix: Water**  
**Analysis Batch: 346204**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			03/17/17 19:46	1
Fluoride	<0.082		0.20	0.082	mg/L			03/17/17 19:46	1
Sulfate	<0.70		1.0	0.70	mg/L			03/17/17 19:46	1

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 400-346204/29**  
**Matrix: Water**  
**Analysis Batch: 346204**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.95		mg/L		100	90 - 110
Fluoride	10.0	10.8		mg/L		108	90 - 110
Sulfate	10.0	10.1		mg/L		101	90 - 110

**Lab Sample ID: LCSD 400-346204/30**  
**Matrix: Water**  
**Analysis Batch: 346204**

**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	10.0	9.86		mg/L		99	90 - 110	1	15
Fluoride	10.0	10.6		mg/L		106	90 - 110	2	15
Sulfate	10.0	9.91		mg/L		99	90 - 110	2	15

**Lab Sample ID: 400-135240-14 MS**  
**Matrix: Water**  
**Analysis Batch: 346204**

**Client Sample ID: WGWC-13**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.4		10.0	11.4		mg/L		100	80 - 120
Fluoride	0.30		10.0	11.0		mg/L		107	80 - 120
Sulfate	11		10.0	21.1		mg/L		105	80 - 120

**Lab Sample ID: 400-135240-14 MSD**  
**Matrix: Water**  
**Analysis Batch: 346204**

**Client Sample ID: WGWC-13**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1.4		10.0	11.4		mg/L		100	80 - 120	0	20
Fluoride	0.30		10.0	11.0		mg/L		107	80 - 120	0	20
Sulfate	11		10.0	21.1		mg/L		104	80 - 120	0	20

**Lab Sample ID: MB 400-346459/4**  
**Matrix: Water**  
**Analysis Batch: 346459**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			03/20/17 12:52	1
Fluoride	<0.082		0.20	0.082	mg/L			03/20/17 12:52	1
Sulfate	<0.70		1.0	0.70	mg/L			03/20/17 12:52	1

**Lab Sample ID: LCS 400-346459/5**  
**Matrix: Water**  
**Analysis Batch: 346459**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.0		mg/L		100	90 - 110
Fluoride	10.0	10.7		mg/L		107	90 - 110
Sulfate	10.0	9.89		mg/L		99	90 - 110

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCSD 400-346459/6**  
**Matrix: Water**  
**Analysis Batch: 346459**

**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	10.0	9.95		mg/L		100	90 - 110	1	15
Fluoride	10.0	10.6		mg/L		106	90 - 110	1	15
Sulfate	10.0	9.85		mg/L		98	90 - 110	0	15

**Lab Sample ID: 400-135298-D-4 MS**  
**Matrix: Water**  
**Analysis Batch: 346459**

**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	<4.5		50.0	51.9		mg/L		104	80 - 120		
Fluoride	0.99	J	50.0	54.3		mg/L		107	80 - 120		
Sulfate	110		50.0	159		mg/L		104	80 - 120		

**Lab Sample ID: 400-135298-D-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 346459**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<4.5		50.0	52.1		mg/L		104	80 - 120	0	20
Fluoride	0.99	J	50.0	54.3		mg/L		107	80 - 120	0	20
Sulfate	110		50.0	159		mg/L		104	80 - 120	0	20

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

**Lab Sample ID: MB 400-346432/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 346822**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 346432**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		03/20/17 13:10	03/22/17 15:57	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:10	03/22/17 15:57	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/20/17 13:10	03/22/17 15:57	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 15:57	5
Boron	<0.021		0.050	0.021	mg/L		03/20/17 13:10	03/22/17 15:57	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:10	03/22/17 15:57	5
Calcium	<0.13		0.25	0.13	mg/L		03/20/17 13:10	03/22/17 15:57	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:10	03/22/17 15:57	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/20/17 13:10	03/22/17 15:57	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:10	03/22/17 15:57	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/20/17 13:10	03/22/17 15:57	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/20/17 13:10	03/22/17 15:57	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/20/17 13:10	03/22/17 15:57	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:10	03/22/17 15:57	5

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

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

**Lab Sample ID: LCS 400-346432/2-A**  
**Matrix: Water**  
**Analysis Batch: 346822**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 346432**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0564		mg/L		113	80 - 120
Arsenic	0.0500	0.0532		mg/L		106	80 - 120
Barium	0.0500	0.0526		mg/L		105	80 - 120
Beryllium	0.0500	0.0520		mg/L		104	80 - 120
Boron	0.100	0.101		mg/L		101	80 - 120
Cadmium	0.0500	0.0530		mg/L		106	80 - 120
Calcium	5.00	5.22		mg/L		104	80 - 120
Chromium	0.0500	0.0524		mg/L		105	80 - 120
Cobalt	0.0500	0.0512		mg/L		102	80 - 120
Lead	0.0500	0.0522		mg/L		104	80 - 120
Lithium	0.0500	0.0529		mg/L		106	80 - 120
Molybdenum	0.100	0.0998		mg/L		100	80 - 120
Selenium	0.0500	0.0523		mg/L		105	80 - 120
Thallium	0.0100	0.0105		mg/L		105	80 - 120

**Lab Sample ID: 400-135240-2 MS**  
**Matrix: Water**  
**Analysis Batch: 346822**

**Client Sample ID: WGWA-7**  
**Prep Type: Total Recoverable**  
**Prep Batch: 346432**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0563		mg/L		113	75 - 125
Arsenic	<0.00046		0.0500	0.0530		mg/L		106	75 - 125
Barium	0.010		0.0500	0.0630		mg/L		105	75 - 125
Beryllium	<0.00034		0.0500	0.0519		mg/L		104	75 - 125
Boron	<0.021		0.100	0.105		mg/L		105	75 - 125
Cadmium	<0.00034		0.0500	0.0535		mg/L		107	75 - 125
Calcium	1.3		5.00	6.63		mg/L		106	75 - 125
Chromium	<0.0011		0.0500	0.0551		mg/L		110	75 - 125
Cobalt	<0.00040		0.0500	0.0547		mg/L		109	75 - 125
Lead	<0.00035		0.0500	0.0470		mg/L		94	75 - 125
Lithium	<0.0032		0.0500	0.0510		mg/L		102	75 - 125
Molybdenum	0.0014	J	0.100	0.0984		mg/L		97	75 - 125
Selenium	<0.00024		0.0500	0.0524		mg/L		105	75 - 125
Thallium	<0.000085		0.0100	0.0105		mg/L		105	75 - 125

**Lab Sample ID: 400-135240-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 346822**

**Client Sample ID: WGWA-7**  
**Prep Type: Total Recoverable**  
**Prep Batch: 346432**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0547		mg/L		109	75 - 125	3	20
Arsenic	<0.00046		0.0500	0.0520		mg/L		104	75 - 125	2	20
Barium	0.010		0.0500	0.0621		mg/L		103	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0504		mg/L		101	75 - 125	3	20
Boron	<0.021		0.100	0.105		mg/L		105	75 - 125	1	20
Cadmium	<0.00034		0.0500	0.0531		mg/L		106	75 - 125	1	20
Calcium	1.3		5.00	6.41		mg/L		102	75 - 125	3	20
Chromium	<0.0011		0.0500	0.0542		mg/L		108	75 - 125	2	20

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

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

**Lab Sample ID: 400-135240-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 346822**

**Client Sample ID: WGWA-7**  
**Prep Type: Total Recoverable**  
**Prep Batch: 346432**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Cobalt	<0.00040		0.0500	0.0544		mg/L		109	75 - 125	1	20
Lead	<0.00035		0.0500	0.0463		mg/L		93	75 - 125	1	20
Lithium	<0.0032		0.0500	0.0495		mg/L		99	75 - 125	3	20
Molybdenum	0.0014	J	0.100	0.0995		mg/L		98	75 - 125	1	20
Selenium	<0.00024		0.0500	0.0503		mg/L		101	75 - 125	4	20
Thallium	<0.000085		0.0100	0.0103		mg/L		103	75 - 125	2	20

**Lab Sample ID: MB 400-346437/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 346660**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 346437**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.0010		0.0025	0.0010	mg/L		03/20/17 13:18	03/21/17 12:05	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/20/17 13:18	03/21/17 12:05	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/20/17 13:18	03/21/17 12:05	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:18	03/21/17 12:05	5
Boron	<0.021		0.050	0.021	mg/L		03/20/17 13:18	03/21/17 12:05	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/20/17 13:18	03/21/17 12:05	5
Calcium	<0.13		0.25	0.13	mg/L		03/20/17 13:18	03/21/17 12:05	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/20/17 13:18	03/21/17 12:05	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/20/17 13:18	03/21/17 12:05	5
Lead	<0.00035		0.0013	0.00035	mg/L		03/20/17 13:18	03/21/17 12:05	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/20/17 13:18	03/21/17 12:05	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/20/17 13:18	03/21/17 12:05	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/20/17 13:18	03/21/17 12:05	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/20/17 13:18	03/21/17 12:05	5

**Lab Sample ID: LCS 400-346437/2-A**  
**Matrix: Water**  
**Analysis Batch: 346660**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 346437**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Antimony	0.0500	0.0552		mg/L		110	80 - 120
Arsenic	0.0500	0.0534		mg/L		107	80 - 120
Barium	0.0500	0.0523		mg/L		105	80 - 120
Beryllium	0.0500	0.0540		mg/L		108	80 - 120
Boron	0.100	0.108		mg/L		108	80 - 120
Cadmium	0.0500	0.0527		mg/L		105	80 - 120
Calcium	5.00	4.97		mg/L		99	80 - 120
Chromium	0.0500	0.0480		mg/L		96	80 - 120
Cobalt	0.0500	0.0472		mg/L		94	80 - 120
Lead	0.0500	0.0511		mg/L		102	80 - 120
Lithium	0.0500	0.0529		mg/L		106	80 - 120
Molybdenum	0.100	0.101		mg/L		101	80 - 120
Selenium	0.0500	0.0531		mg/L		106	80 - 120
Thallium	0.0100	0.0106		mg/L		106	80 - 120

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

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

**Lab Sample ID: 400-135244-B-11-F MS ^5**  
**Matrix: Water**  
**Analysis Batch: 346660**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 346437**

Analyte	Sample	Sample	Spike	MS MS		Unit	D	%Rec	Limits	%Rec.
	Result	Qualifier		Result	Qualifier					
Antimony	<0.0010	F1	0.0500	0.0586		mg/L		117	75 - 125	
Arsenic	0.0023		0.0500	0.0572		mg/L		110	75 - 125	
Barium	0.028		0.0500	0.0797		mg/L		104	75 - 125	
Beryllium	<0.00034		0.0500	0.0553		mg/L		111	75 - 125	
Boron	0.22	F1	0.100	0.341		mg/L		124	75 - 125	
Cadmium	<0.00034		0.0500	0.0522		mg/L		104	75 - 125	
Calcium	110		5.00	113	4	mg/L		108	75 - 125	
Chromium	0.0020	J	0.0500	0.0503		mg/L		97	75 - 125	
Cobalt	<0.00040		0.0500	0.0481		mg/L		96	75 - 125	
Lead	<0.00035		0.0500	0.0466		mg/L		93	75 - 125	
Lithium	<0.0032		0.0500	0.0538		mg/L		108	75 - 125	
Molybdenum	0.0062	J	0.100	0.107		mg/L		101	75 - 125	
Selenium	0.0032	F2 F1	0.0500	0.00611	F1	mg/L		6	75 - 125	
Thallium	<0.000085		0.0100	0.0107		mg/L		107	75 - 125	

**Lab Sample ID: 400-135244-B-11-G MSD ^5**  
**Matrix: Water**  
**Analysis Batch: 346660**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 346437**

Analyte	Sample	Sample	Spike	MSD MSD		Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Antimony	<0.0010	F1	0.0450	0.0576	F1	mg/L		128	75 - 125	2	20
Arsenic	0.0023		0.0450	0.0557		mg/L		119	75 - 125	3	20
Barium	0.028		0.0450	0.0817		mg/L		120	75 - 125	2	20
Beryllium	<0.00034		0.0450	0.0541		mg/L		120	75 - 125	2	20
Boron	0.22	F1	0.0900	0.332	F1	mg/L		129	75 - 125	3	20
Cadmium	<0.00034		0.0450	0.0524		mg/L		116	75 - 125	0	20
Calcium	110		4.50	113	4	mg/L		123	75 - 125	0	20
Chromium	0.0020	J	0.0450	0.0500		mg/L		107	75 - 125	1	20
Cobalt	<0.00040		0.0450	0.0482		mg/L		107	75 - 125	0	20
Lead	<0.00035		0.0450	0.0460		mg/L		102	75 - 125	1	20
Lithium	<0.0032		0.0450	0.0521		mg/L		116	75 - 125	3	20
Molybdenum	0.0062	J	0.0900	0.105		mg/L		109	75 - 125	2	20
Selenium	0.0032	F2 F1	0.0450	0.00302	F1 F2	mg/L		-0.3	75 - 125	68	20
Thallium	<0.000085		0.00900	0.0107		mg/L		119	75 - 125	0	20

**Lab Sample ID: MB 400-346573/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 347015**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 346573**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.0010		0.0025	0.0010	mg/L		03/21/17 13:03	03/23/17 11:39	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/21/17 13:03	03/23/17 11:39	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/21/17 13:03	03/23/17 11:39	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/21/17 13:03	03/23/17 11:39	5
Boron	<0.021		0.050	0.021	mg/L		03/21/17 13:03	03/23/17 11:39	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/21/17 13:03	03/23/17 11:39	5
Calcium	<0.13		0.25	0.13	mg/L		03/21/17 13:03	03/23/17 11:39	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/21/17 13:03	03/23/17 11:39	5

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

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

**Lab Sample ID: MB 400-346573/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 347015**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 346573**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/21/17 13:03	03/23/17 11:39	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		03/21/17 13:03	03/23/17 11:39	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/21/17 13:03	03/23/17 11:39	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/21/17 13:03	03/23/17 11:39	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/21/17 13:03	03/23/17 11:39	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/21/17 13:03	03/23/17 11:39	5

**Lab Sample ID: LCS 400-346573/2-A**  
**Matrix: Water**  
**Analysis Batch: 347015**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 346573**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0557		mg/L		111	80 - 120
Arsenic	0.0500	0.0528		mg/L		106	80 - 120
Barium	0.0500	0.0523		mg/L		105	80 - 120
Beryllium	0.0500	0.0513		mg/L		103	80 - 120
Boron	0.100	0.0990		mg/L		99	80 - 120
Cadmium	0.0500	0.0520		mg/L		104	80 - 120
Calcium	5.00	5.02		mg/L		100	80 - 120
Chromium	0.0500	0.0516		mg/L		103	80 - 120
Cobalt	0.0500	0.0486		mg/L		97	80 - 120
Lead	0.0500	0.0597	^	mg/L		119	80 - 120
Lithium	0.0500	0.0534		mg/L		107	80 - 120
Molybdenum	0.100	0.102		mg/L		102	80 - 120
Selenium	0.0500	0.0511		mg/L		102	80 - 120
Thallium	0.0100	0.0106		mg/L		106	80 - 120

**Lab Sample ID: 400-135255-B-2-C MS ^5**  
**Matrix: Water**  
**Analysis Batch: 347015**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 346573**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0541		mg/L		108	75 - 125
Arsenic	0.0015		0.0500	0.0559		mg/L		109	75 - 125
Barium	0.040		0.0500	0.0930		mg/L		106	75 - 125
Beryllium	<0.00034		0.0500	0.0533		mg/L		107	75 - 125
Cadmium	0.00049	J	0.0500	0.0545		mg/L		108	75 - 125
Calcium	78		5.00	80.2	4	mg/L		50	75 - 125
Chromium	<0.0011		0.0500	0.0484		mg/L		97	75 - 125
Cobalt	0.00040	J	0.0500	0.0534		mg/L		106	75 - 125
Lead	<0.00035	^	0.0500	0.0548	^	mg/L		110	75 - 125
Lithium	0.029		0.0500	0.0818		mg/L		106	75 - 125
Selenium	0.0079		0.0500	0.0603		mg/L		105	75 - 125
Thallium	0.00024	J	0.0100	0.0108		mg/L		106	75 - 125

TestAmerica Pensacola



# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

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

**Lab Sample ID: 400-135255-B-2-D MSD ^5**

**Matrix: Water**  
**Analysis Batch: 347015**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total Recoverable**  
**Prep Batch: 346573**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
Antimony	<0.0010		0.0500	0.0522		mg/L		104	75 - 125	4	20	
Arsenic	0.0015		0.0500	0.0554		mg/L		108	75 - 125	1	20	
Barium	0.040		0.0500	0.0924		mg/L		105	75 - 125	1	20	
Beryllium	<0.00034		0.0500	0.0528		mg/L		106	75 - 125	1	20	
Cadmium	0.00049	J	0.0500	0.0517		mg/L		102	75 - 125	5	20	
Calcium	78		5.00	79.5	4	mg/L		36	75 - 125	1	20	
Chromium	<0.0011		0.0500	0.0473		mg/L		95	75 - 125	2	20	
Cobalt	0.00040	J	0.0500	0.0535		mg/L		106	75 - 125	0	20	
Lead	<0.00035	^	0.0500	0.0540	^	mg/L		108	75 - 125	1	20	
Lithium	0.029		0.0500	0.0798		mg/L		102	75 - 125	2	20	
Selenium	0.0079		0.0500	0.0573		mg/L		99	75 - 125	5	20	
Thallium	0.00024	J	0.0100	0.0108		mg/L		105	75 - 125	1	20	

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 400-346424/14-A**

**Matrix: Water**  
**Analysis Batch: 346608**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**  
**Prep Batch: 346424**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000070		0.00020	0.000070	mg/L		03/20/17 11:59	03/21/17 14:22	1

**Lab Sample ID: LCS 400-346424/15-A**

**Matrix: Water**  
**Analysis Batch: 346608**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**  
**Prep Batch: 346424**

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	RPD
Mercury	0.00101	0.00107		mg/L		106	80 - 120	

**Lab Sample ID: 400-135240-1 MS**

**Matrix: Water**  
**Analysis Batch: 346608**

**Client Sample ID: WGWA-18**

**Prep Type: Total/NA**  
**Prep Batch: 346424**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec.	
				Result	Qualifier				Limits	RPD
Mercury	0.000071	J F2	0.00201	0.00217		mg/L		104	80 - 120	

**Lab Sample ID: 400-135240-1 MSD**

**Matrix: Water**  
**Analysis Batch: 346608**

**Client Sample ID: WGWA-18**

**Prep Type: Total/NA**  
**Prep Batch: 346424**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
Mercury	0.000071	J F2	0.00201	0.00172		mg/L		82	80 - 120	23	20	

**Lab Sample ID: MB 400-346429/14-A**

**Matrix: Water**  
**Analysis Batch: 346931**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**  
**Prep Batch: 346429**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.000122	J	0.00020	0.000070	mg/L		03/20/17 12:31	03/23/17 14:48	1

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Lab Sample ID: LCS 400-346429/15-A**  
**Matrix: Water**  
**Analysis Batch: 346931**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 346429**  
**%Rec. Limits**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00111		mg/L		110	80 - 120

**Lab Sample ID: 400-135240-18 MS**  
**Matrix: Water**  
**Analysis Batch: 346931**

**Client Sample ID: WGWC-8**  
**Prep Type: Total/NA**  
**Prep Batch: 346429**  
**%Rec. Limits**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00013	J B	0.00201	0.00216		mg/L		101	80 - 120

**Lab Sample ID: 400-135240-18 MSD**  
**Matrix: Water**  
**Analysis Batch: 346931**

**Client Sample ID: WGWC-8**  
**Prep Type: Total/NA**  
**Prep Batch: 346429**  
**%Rec. RPD Limit**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.00013	J B	0.00201	0.00220		mg/L		103	80 - 120	2	20

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

**Lab Sample ID: MB 400-346308/1**  
**Matrix: Water**  
**Analysis Batch: 346308**

**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			03/19/17 11:56	1

**Lab Sample ID: LCS 400-346308/2**  
**Matrix: Water**  
**Analysis Batch: 346308**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**%Rec. Limits**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	293	244		mg/L		83	78 - 122

**Lab Sample ID: 400-135240-12 DU**  
**Matrix: Water**  
**Analysis Batch: 346308**

**Client Sample ID: WGWA-1**  
**Prep Type: Total/NA**  
**RPD Limit**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	<3.4		<3.4		mg/L		NC	5

**Lab Sample ID: MB 400-346309/1**  
**Matrix: Water**  
**Analysis Batch: 346309**

**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			03/19/17 12:47	1

**Lab Sample ID: LCS 400-346309/2**  
**Matrix: Water**  
**Analysis Batch: 346309**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**%Rec. Limits**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	293	266		mg/L		91	78 - 122

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

**Lab Sample ID: 400-135240-7 DU**  
**Matrix: Water**  
**Analysis Batch: 346309**

**Client Sample ID: WGWA-6**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	110		110		mg/L		0	5

**Lab Sample ID: MB 400-346356/1**  
**Matrix: Water**  
**Analysis Batch: 346356**

**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			03/20/17 13:13	1

**Lab Sample ID: LCS 400-346356/2**  
**Matrix: Water**  
**Analysis Batch: 346356**

**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	260		mg/L		89	78 - 122

**Lab Sample ID: 400-135225-A-4 DU**  
**Matrix: Water**  
**Analysis Batch: 346356**

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	310		304		mg/L		0.7	5

**Lab Sample ID: MB 400-346357/1**  
**Matrix: Water**  
**Analysis Batch: 346357**

**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			03/20/17 14:06	1

**Lab Sample ID: LCS 400-346357/2**  
**Matrix: Water**  
**Analysis Batch: 346357**

**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: 400-135240-20 DU**  
**Matrix: Water**  
**Analysis Batch: 346357**

**Client Sample ID: WGWC-12**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	120		124		mg/L		0	5

**Lab Sample ID: MB 400-346671/1**  
**Matrix: Water**  
**Analysis Batch: 346671**

**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			03/22/17 13:59	1

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-1  
 SDG: Ash Pond

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

**Lab Sample ID: LCS 400-346671/2**  
**Matrix: Water**  
**Analysis Batch: 346671**

**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	250		mg/L		85	78 - 122

**Lab Sample ID: 400-135240-26 DU**  
**Matrix: Water**  
**Analysis Batch: 346671**

**Client Sample ID: WGWC-14A**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	56		56.0		mg/L		0	5

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

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

**Chain of Custody Record**

**TestAmerica**

**Client Information:**  
 Client Contact: **Joju Abraham**  
 Company: **Southern Company**  
 Address: **2411 Ralph McGill Blvd SE B10185**  
 City: **Atlanta**  
 State: **GA, 30308**  
 Phone: **404-508-7289**  
 Email: **JAbraham@southernco.com**  
 Project Name: **Plant Wansley - Ash Pond**  
 Size: **CCR**

**Sampler:** T. Payne / T.M. Thomas Jr / C. Hurdle / C.  
**Lab P/N:** Whitlire, Chayenne R  
**E-Mail:** chayenne.whitlire@testamericainc.com

**COO No.:**  
**Page:**  
**Job #:**

**Due Date Requested:**  
**TAT Requested (days):**  
**PO #:**  
**WO #:**  
**Project #:**  
**SSOW#:**

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (Prevalence, Sporadic, Opportunistic, Infrequent, Rare)	Analysis Requested	
					Method	Code
WGWA-18	3/14/17	1045	G	W	TDS - SM 2640C - Cl, F, SO4 - EPA 300	Methals - Part 267 Appendix III & IV EPA 8020 & EPA 7470
WGWA-7	3/14/17	1050	G	W	Radium 226 & 228 - SW-1418 8316 & 8320	
WGWA-3	3/14/17	1215	G	W		
WGWA-4	3/14/17	1215	G	W		
WGWA-5	3/14/17	1240	G	W		
WGWC-17	3/14/17	1415	G	W		
WGWA-6	3/14/17	1441	G	W		
WGWC-15	3/14/17	1450	G	W		
FB-1	3/14/17	1210	G	W		
FERB-1	3/14/17	1230	G	W		
DUP-1	3/14/17	-	G	W		

**Special Instructions/Note:**

400-135240 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/OC Requirements:**

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Polson B  Unknown  Radiological

**Deliverable Requested:** I, II, III, IV, Other (specify)

**Empty Kit Returned by:**  
 Received by: *[Signature]* Date: 3/15/17 12:50  
 Company: **JA**

**Returned by:**  
 Received by: *[Signature]* Date: 3/15/17 1600  
 Company: **JA**

**Method of Shipment:**  
 Received by: *[Signature]* Date: 3/15/17 12:50  
 Company: **JA**

**Custody Seal No.:**  
 Yes  No  
 Cooler Temperature(s) °C and Other Remarks: 0.0°C, 2.2°C

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

Chain of Custody Record

TestAmerica

Client Information

Client Contact: Jolij Abraham  
 Company: Southern Company  
 Address: 2411 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State: GA 30308  
 Phone: 404-606-7238  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

Carrier Tracking Note(s)

Lab Pk: Whitmore, Cheyenne R  
 E-Mail: cheyenne.whitmore@testamericainc.com

COOC No:

Page:

Job #:

Due Date Requested:

LAB Requested (days):

PO #:

WO #:

Project #:

SSOW#:

Analysis Requested

TDS - SM 240C; Cl, F, SO4, EPA 300  
 Metals - (Part 267 Appendix III & IV) EPA 6020 & EPA 7470  
 Radium 228 & 228 - GW-846 9316 & 9320

Preservation Codes:  
 A - HCL  
 B - NaOH  
 C - Zn Acetate  
 D - Nitric Acid  
 E - NaHSO4  
 F - MeOH  
 G - Anichlor  
 H - Ascorbic Acid  
 I - Ice  
 J - DI Water  
 K - EDTA  
 L - EDA  
 Other:  
 M - Hexane  
 N - None  
 O - AshAD2  
 P - Na2OAS  
 Q - Na2SO3  
 R - Na2S2O3  
 S - H2SO4  
 T - TSP Dodecahydrate  
 U - Acetone  
 V - MCAA  
 W - pH 4-5  
 X - EDTA  
 Z - other (specify)

Special Instructions/Notes:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, S=Sub, R=Rad)	Matrix (N=Non-hazardous, S=Soil, O=Organic, I=Inorganic, J=Jelly)	Return To Client	Disposal By Lab	Archive For	Months
WGWA-1	3/13/17	1550	S	W	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
WGWA-2	3/13/17	1605	S	W	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Possible Hazard Identification

Non-Hazard  
 Flammable  
 Skin Irritant  
 Poison B  
 Unknown  
 Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by:

Relinquished by:

Relinquished by:

Relinquished by:

Custody Seals Intact:  
 Yes  No

Custody Seal No.:

Date: 3/15/17 1250  
 Date/Time: 3/15/17 1250  
 Date/Time: 3/15/17 1600

Received by: [Signature]  
 Received by: [Signature]  
 Received by: [Signature]

Date/Time: 3/16/17 909  
 Date/Time: 3/16/17 909

Company: TA-PEN  
 Company: TA-PEN  
 Company: TA-PEN

Cooler Temperature(s) To and From Remarks:



**TestAmerica Pensacola**  
 3355 McLemore Drive  
 Pensacola, FL 32514  
 Phone (950) 474-1001 Fax (950) 478-2671

**Chain of Custody Record**

**TestAmerica**

Client Information  
 Client Contact: Joju Abraham  
 Lab POC: C. Hurdle CH.T. Payne, M. Thomas MT.J. Morrison JM  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: J.Abraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR  
 Carrier Tracking Note(s):  
 Analysis Requested:  
 Preservation Codes:  
 A - HCL  
 B - NaOH  
 C - Zn Acetate  
 D - Nitric Acid  
 E - NH4SO4  
 F - MeOH  
 G - Amalhor  
 H - Ascorbic Acid  
 I - Ice  
 J - DI Water  
 K - EDTA  
 L - EDA  
 Other:  
 M - Hexane  
 N - None  
 O - AsAc2O2  
 P - Na2OAS  
 Q - Na2SO3  
 R - Na2S2O3  
 S - H2SO4  
 T - TSP Dodecahydrate  
 U - Acetone  
 V - MCAA  
 W - pH 4-5  
 Z - other (specify)

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (W=Water, S=Soil, O=Organic, M=Metals)	Analysis Requested	Special Instructions/Notes
WGWC-13	3/15/17	0920	G	W	Metals - (Part 287 Appendix III & IV) EPA 6020 & EPA 7470 TDS - SM 2640C: Cl, F, SO4 - EPA 830 Radium 226 & 228 - SM 416 9315 & 9320	Extra radium bottle collected for lab QA/QC
WGWC-16	3/15/17	1005	G	W		
WGWC-11	3/15/17	1015	G	W		
WGWC-19	3/15/17	1020	G	W		
WGWC-6	3/15/17	1120	G	W		
WGWC-10	3/15/17	1150	G	W		Extra radium bottle collected for lab QA/QC
WGWC-12	3/15/17	1155	G	W		
WGWC-9	3/15/17	1435	G	W		
FERB-2	3/15/17	0935	G	W		
FERB-2	3/15/17	1100	G	W		
DUP-2	3/15/17	-	G	W		

Possible Hazard Identification  
 Non-Hazard  
 Flammable  
 Skin Irritant  
 Poison B  
 Unknown  
 Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)  
 Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date Time: 3/16/17 1300 Company: TA  
 Relinquished by: \_\_\_\_\_ Date Time: 3/17/17 901 Company: TA-PEN  
 Relinquished by: \_\_\_\_\_ Date Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Custody Seal No.: \_\_\_\_\_  
 A Yes A No  
 Cooler Temperature(s) and Other Remarks: 2.0°C, 2.9°C - IP2

681-A1818







## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-135240-1

SDG Number: Ash Pond

**Login Number: 135240**

**List Number: 1**

**Creator: Hughes, Nicholas T**

**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.	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	0.0°C, 2.2°C - IR7 / 2.0°C, 2.9°C - IR2, 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.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	WGWC-19 1 liter unpreserved received half full with loose lid.
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 Wansley

TestAmerica Job ID: 400-135240-1  
SDG: Ash Pond

## 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: 400-135240-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Plant Wansley

For:

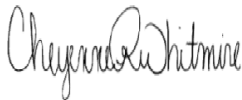
Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

4/19/2017 5:19:56 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

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

### LINKS

Review your project  
results through

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Have a Question?



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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 Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

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**Job ID: 400-135240-2**

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**Laboratory: TestAmerica Pensacola**

## Narrative

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### Job Narrative 400-135240-2

#### Receipt Exceptions

The container labels for Sample 22 are listed as 'WGWC-11', while the COC lists Sample 21 as 'FB-2'. Matched by time, logged in per chain. WGWC-9 (400-135240-21), FB-2 (400-135240-22)

#### RAD

Method(s) PrecSep\_0: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 160-299581 and 160-299581. An LCS/LCSD were prepared to demonstrate batch precision.

Method(s) PrecSep-21: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 160-299579. An LCS/LCSD were prepared to demonstrate batch precision.

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# Method Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

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 Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-135240-1	WGWA-18	Water	03/14/17 10:45	03/16/17 09:09
400-135240-2	WGWA-7	Water	03/14/17 10:50	03/16/17 09:09
400-135240-3	WGWA-3	Water	03/14/17 12:15	03/16/17 09:09
400-135240-4	WGWA-4	Water	03/14/17 12:15	03/16/17 09:09
400-135240-5	WGWA-5	Water	03/14/17 12:40	03/16/17 09:09
400-135240-6	WGWC-17	Water	03/14/17 14:15	03/16/17 09:09
400-135240-7	WGWA-6	Water	03/14/17 14:41	03/16/17 09:09
400-135240-8	WGWC-15	Water	03/14/17 14:50	03/16/17 09:09
400-135240-9	FB-1	Water	03/14/17 12:10	03/16/17 09:09
400-135240-10	FERB-1	Water	03/14/17 12:30	03/16/17 09:09
400-135240-11	DUP-1	Water	03/14/17 00:00	03/16/17 09:09
400-135240-12	WGWA-1	Water	03/13/17 15:50	03/16/17 09:09
400-135240-13	WGWA-2	Water	03/13/17 16:05	03/16/17 09:09
400-135240-14	WGWC-13	Water	03/15/17 09:20	03/17/17 09:01
400-135240-15	WGWC-16	Water	03/15/17 10:05	03/17/17 09:01
400-135240-16	WGWC-11	Water	03/15/17 10:15	03/17/17 09:01
400-135240-17	WGWC-19	Water	03/15/17 10:20	03/17/17 09:01
400-135240-18	WGWC-8	Water	03/15/17 11:20	03/17/17 09:01
400-135240-19	WGWC-10	Water	03/15/17 11:50	03/17/17 09:01
400-135240-20	WGWC-12	Water	03/15/17 11:55	03/17/17 09:01
400-135240-21	WGWC-9	Water	03/15/17 14:35	03/17/17 09:01
400-135240-22	FB-2	Water	03/15/17 09:35	03/17/17 09:01
400-135240-23	FERB-2	Water	03/15/17 11:00	03/17/17 09:01
400-135240-24	DUP-2	Water	03/15/17 00:00	03/17/17 09:01
400-135240-26	WGWC-14A	Water	03/17/17 10:00	03/18/17 09:51

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWA-18**

**Date Collected: 03/14/17 10:45**

**Date Received: 03/16/17 09:09**

**Lab Sample ID: 400-135240-1**

**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	0.179		0.0882	0.0897	1.00	0.107	pCi/L	03/24/17 08:27	04/17/17 06:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					03/24/17 08:27	04/17/17 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	0.0150	U	0.217	0.217	1.00	0.382	pCi/L	03/24/17 08:52	04/07/17 11:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					03/24/17 08:52	04/07/17 11:53	1
Y Carrier	88.2		40 - 110					03/24/17 08:52	04/07/17 11:53	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	0.194	U	0.234	0.234	5.00	0.382	pCi/L		04/18/17 12:13	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWA-7**

**Date Collected: 03/14/17 10:50**

**Date Received: 03/16/17 09:09**

**Lab Sample ID: 400-135240-2**

**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	0.00143	U	0.0423	0.0423	1.00	0.0902	pCi/L	03/24/17 08:27	04/17/17 06:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					03/24/17 08:27	04/17/17 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	0.0177	U	0.181	0.181	1.00	0.321	pCi/L	03/24/17 08:52	04/07/17 11:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					03/24/17 08:52	04/07/17 11:53	1
Y Carrier	91.6		40 - 110					03/24/17 08:52	04/07/17 11:53	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	0.0192	U	0.186	0.186	5.00	0.321	pCi/L		04/18/17 12:13	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWA-3**

**Lab Sample ID: 400-135240-3**

**Date Collected: 03/14/17 12:15**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0424	U	0.0643	0.0644	1.00	0.110	pCi/L	03/24/17 08:27	04/17/17 06:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/24/17 08:27	04/17/17 06:23	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.124	U	0.178	0.179	1.00	0.299	pCi/L	03/24/17 08:52	04/07/17 11:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/24/17 08:52	04/07/17 11:53	1
Y Carrier	89.3		40 - 110					03/24/17 08:52	04/07/17 11:53	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	0.167	U	0.190	0.190	5.00	0.299	pCi/L		04/18/17 12:13	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-135240-4**

Date Collected: 03/14/17 12:15

Matrix: Water

Date Received: 03/16/17 09:09

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.284		0.106	0.109	1.00	0.112	pCi/L	03/24/17 08:27	04/17/17 06:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					03/24/17 08:27	04/17/17 06:23	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.504		0.235	0.239	1.00	0.340	pCi/L	03/24/17 08:52	04/07/17 11:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					03/24/17 08:52	04/07/17 11:53	1
Y Carrier	86.7		40 - 110					03/24/17 08:52	04/07/17 11:53	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	0.788		0.257	0.263	5.00	0.340	pCi/L		04/18/17 12:13	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
 SDG: Ash Pond

**Client Sample ID: WGWA-5**

**Lab Sample ID: 400-135240-5**

**Date Collected: 03/14/17 12:40**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0713	U	0.0634	0.0638	1.00	0.0952	pCi/L	03/24/17 08:27	04/17/17 06:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					03/24/17 08:27	04/17/17 06:23	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0477	U	0.179	0.179	1.00	0.313	pCi/L	03/24/17 08:52	04/07/17 11:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					03/24/17 08:52	04/07/17 11:53	1
Y Carrier	89.0		40 - 110					03/24/17 08:52	04/07/17 11:53	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	0.119	U	0.190	0.190	5.00	0.313	pCi/L		04/18/17 12:13	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-135240-6**

**Date Collected: 03/14/17 14:15**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0391	U	0.0589	0.0591	1.00	0.101	pCi/L	03/24/17 08:27	04/17/17 06:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.8		40 - 110					03/24/17 08:27	04/17/17 06:23	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.146	U	0.193	0.194	1.00	0.373	pCi/L	03/24/17 08:52	04/07/17 11:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.8		40 - 110					03/24/17 08:52	04/07/17 11:53	1
Y Carrier	89.0		40 - 110					03/24/17 08:52	04/07/17 11:53	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	-0.107	U	0.202	0.202	5.00	0.373	pCi/L		04/18/17 12:13	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWA-6**

**Date Collected: 03/14/17 14:41**

**Date Received: 03/16/17 09:09**

**Lab Sample ID: 400-135240-7**

**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	0.233		0.0949	0.0972	1.00	0.0987	pCi/L	03/24/17 08:27	04/17/17 06:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.8		40 - 110					03/24/17 08:27	04/17/17 06:23	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.356		0.222	0.224	1.00	0.336	pCi/L	03/24/17 08:52	04/07/17 11:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.8		40 - 110					03/24/17 08:52	04/07/17 11:53	1
Y Carrier	86.0		40 - 110					03/24/17 08:52	04/07/17 11:53	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	0.589		0.241	0.244	5.00	0.336	pCi/L		04/18/17 12:13	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-135240-8**

**Date Collected: 03/14/17 14:50**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.101	U	0.0763	0.0768	1.00	0.111	pCi/L	03/24/17 08:27	04/17/17 06:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					03/24/17 08:27	04/17/17 06:23	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.146	U	0.196	0.196	1.00	0.327	pCi/L	03/24/17 08:52	04/07/17 11:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					03/24/17 08:52	04/07/17 11:53	1
Y Carrier	89.0		40 - 110					03/24/17 08:52	04/07/17 11:53	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	0.247	U	0.210	0.211	5.00	0.327	pCi/L		04/18/17 12:13	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: FB-1**  
**Date Collected: 03/14/17 12:10**  
**Date Received: 03/16/17 09:09**

**Lab Sample ID: 400-135240-9**  
**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	0.0698	U	0.0624	0.0627	1.00	0.0942	pCi/L	03/24/17 08:27	04/17/17 06:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/24/17 08:27	04/17/17 06:23	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.148	U	0.181	0.182	1.00	0.349	pCi/L	03/24/17 08:52	04/07/17 11:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/24/17 08:52	04/07/17 11:53	1
Y Carrier	87.5		40 - 110					03/24/17 08:52	04/07/17 11:53	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	-0.0778	U	0.192	0.192	5.00	0.349	pCi/L		04/18/17 12:13	1



# Client Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
 SDG: Ash Pond

**Client Sample ID: FERB-1**

**Lab Sample ID: 400-135240-10**

**Date Collected: 03/14/17 12:30**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0207	U	0.0452	0.0452	1.00	0.0838	pCi/L	03/24/17 08:27	04/17/17 06:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.5		40 - 110					03/24/17 08:27	04/17/17 06:23	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.189	U	0.148	0.149	1.00	0.312	pCi/L	03/24/17 08:52	04/07/17 11:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.5		40 - 110					03/24/17 08:52	04/07/17 11:53	1
Y Carrier	88.2		40 - 110					03/24/17 08:52	04/07/17 11:53	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	-0.168	U	0.155	0.156	5.00	0.312	pCi/L		04/18/17 12:13	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: DUP-1**  
**Date Collected: 03/14/17 00:00**  
**Date Received: 03/16/17 09:09**

**Lab Sample ID: 400-135240-11**  
**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	0.133		0.0809	0.0818	1.00	0.106	pCi/L	03/24/17 08:27	04/17/17 06:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					03/24/17 08:27	04/17/17 06:23	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.587		0.296	0.300	1.00	0.444	pCi/L	03/24/17 08:52	04/07/17 11:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					03/24/17 08:52	04/07/17 11:49	1
Y Carrier	85.6		40 - 110					03/24/17 08:52	04/07/17 11:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.720		0.306	0.311	5.00	0.444	pCi/L		04/18/17 12:13	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWA-1**

**Lab Sample ID: 400-135240-12**

**Date Collected: 03/13/17 15:50**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0547	U	0.0549	0.0551	1.00	0.0844	pCi/L	03/24/17 08:27	04/17/17 06:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					03/24/17 08:27	04/17/17 06:24	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.185	U	0.194	0.195	1.00	0.374	pCi/L	03/24/17 08:52	04/07/17 11:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					03/24/17 08:52	04/07/17 11:54	1
Y Carrier	89.7		40 - 110					03/24/17 08:52	04/07/17 11:54	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.130	U	0.202	0.202	5.00	0.374	pCi/L		04/18/17 12:13	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWA-2**

**Lab Sample ID: 400-135240-13**

**Date Collected: 03/13/17 16:05**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00924	U	0.0535	0.0535	1.00	0.105	pCi/L	03/24/17 08:27	04/17/17 06:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.4		40 - 110					03/24/17 08:27	04/17/17 06:24	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.157	U	0.176	0.176	1.00	0.347	pCi/L	03/24/17 08:52	04/07/17 11:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.4		40 - 110					03/24/17 08:52	04/07/17 11:53	1
Y Carrier	86.7		40 - 110					03/24/17 08:52	04/07/17 11:53	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	-0.147	U	0.184	0.184	5.00	0.347	pCi/L		04/18/17 12:13	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-135240-14**

Date Collected: 03/15/17 09:20

Matrix: Water

Date Received: 03/17/17 09:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.179		0.0847	0.0862	1.00	0.0995	pCi/L	03/24/17 08:27	04/17/17 06:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					03/24/17 08:27	04/17/17 06:24	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.667		0.282	0.289	1.00	0.411	pCi/L	03/24/17 08:52	04/07/17 11:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					03/24/17 08:52	04/07/17 11:54	1
Y Carrier	88.2		40 - 110					03/24/17 08:52	04/07/17 11:54	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.847		0.295	0.301	5.00	0.411	pCi/L		04/18/17 12:13	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-135240-15**

Date Collected: 03/15/17 10:05

Matrix: Water

Date Received: 03/17/17 09:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.326		0.105	0.109	1.00	0.0970	pCi/L	03/24/17 08:27	04/17/17 06:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					03/24/17 08:27	04/17/17 06:24	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.31		0.310	0.332	1.00	0.390	pCi/L	03/24/17 08:52	04/07/17 11:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					03/24/17 08:52	04/07/17 11:50	1
Y Carrier	90.1		40 - 110					03/24/17 08:52	04/07/17 11:50	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.64		0.327	0.350	5.00	0.390	pCi/L		04/18/17 12:13	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-135240-16**

**Date Collected: 03/15/17 10:15**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0483	U	0.0567	0.0569	1.00	0.0921	pCi/L	03/24/17 08:27	04/17/17 06:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					03/24/17 08:27	04/17/17 06:24	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0726	U	0.249	0.249	1.00	0.428	pCi/L	03/24/17 08:52	04/07/17 11:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					03/24/17 08:52	04/07/17 11:50	1
Y Carrier	89.3		40 - 110					03/24/17 08:52	04/07/17 11:50	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.121	U	0.255	0.255	5.00	0.428	pCi/L		04/18/17 12:13	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-135240-17**

**Date Collected: 03/15/17 10:20**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0497	U	0.0556	0.0558	1.00	0.0889	pCi/L	03/24/17 08:27	04/17/17 06:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					03/24/17 08:27	04/17/17 06:24	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.206	U	0.223	0.224	1.00	0.366	pCi/L	03/24/17 08:52	04/07/17 11:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					03/24/17 08:52	04/07/17 11:50	1
Y Carrier	89.3		40 - 110					03/24/17 08:52	04/07/17 11:50	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.255	U	0.230	0.231	5.00	0.366	pCi/L		04/18/17 12:13	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-135240-18**

**Date Collected: 03/15/17 11:20**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.358		0.106	0.111	1.00	0.0934	pCi/L	03/24/17 08:27	04/17/17 05:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					03/24/17 08:27	04/17/17 05:56	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.960		0.275	0.289	1.00	0.352	pCi/L	03/24/17 08:52	04/07/17 11:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					03/24/17 08:52	04/07/17 11:49	1
Y Carrier	86.7		40 - 110					03/24/17 08:52	04/07/17 11:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.32		0.295	0.310	5.00	0.352	pCi/L		04/18/17 12:13	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
 SDG: Ash Pond

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-135240-19**

**Date Collected: 03/15/17 11:50**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0836	U	0.0672	0.0676	1.00	0.0993	pCi/L	03/24/17 08:27	04/17/17 05:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					03/24/17 08:27	04/17/17 05:56	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.439		0.268	0.271	1.00	0.412	pCi/L	03/24/17 08:52	04/07/17 11:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					03/24/17 08:52	04/07/17 11:49	1
Y Carrier	84.9		40 - 110					03/24/17 08:52	04/07/17 11:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.523		0.276	0.279	5.00	0.412	pCi/L		04/18/17 12:13	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-135240-20**

Date Collected: 03/15/17 11:55

Matrix: Water

Date Received: 03/17/17 09:01

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.112		0.0782	0.0789	1.00	0.112	pCi/L	03/24/17 08:27	04/17/17 05:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.5		40 - 110					03/24/17 08:27	04/17/17 05:56	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.142	U	0.220	0.221	1.00	0.371	pCi/L	03/24/17 08:52	04/07/17 11:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.5		40 - 110					03/24/17 08:52	04/07/17 11:49	1
Y Carrier	84.5		40 - 110					03/24/17 08:52	04/07/17 11:49	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.254	U	0.234	0.235	5.00	0.371	pCi/L		04/18/17 12:13	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-135240-21**

**Date Collected: 03/15/17 14:35**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0178	U	0.0533	0.0533	1.00	0.102	pCi/L	03/24/17 13:19	04/17/17 08:30	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	90.9		40 - 110					03/24/17 13:19	04/17/17 08:30	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.253	U	0.221	0.222	1.00	0.351	pCi/L	03/24/17 13:46	04/10/17 10:50	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	90.9		40 - 110					03/24/17 13:46	04/10/17 10:50	1
Y Carrier	80.7		40 - 110					03/24/17 13:46	04/10/17 10:50	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.271	U	0.227	0.228	5.00	0.351	pCi/L		04/18/17 12:13	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: FB-2**  
**Date Collected: 03/15/17 09:35**  
**Date Received: 03/17/17 09:01**

**Lab Sample ID: 400-135240-22**  
**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	0.000	U	0.0555	0.0555	1.00	0.113	pCi/L	03/24/17 13:19	04/17/17 08:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					03/24/17 13:19	04/17/17 08:30	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.116	U	0.207	0.208	1.00	0.398	pCi/L	03/24/17 13:46	04/10/17 10:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					03/24/17 13:46	04/10/17 10:50	1
Y Carrier	79.3		40 - 110					03/24/17 13:46	04/10/17 10:50	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.116	U	0.215	0.215	5.00	0.398	pCi/L		04/18/17 12:13	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: FERB-2**

**Lab Sample ID: 400-135240-23**

**Date Collected: 03/15/17 11:00**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0205	U	0.0523	0.0523	1.00	0.0983	pCi/L	03/24/17 13:19	04/17/17 08:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					03/24/17 13:19	04/17/17 08:30	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0927	U	0.245	0.245	1.00	0.449	pCi/L	03/24/17 13:46	04/10/17 10:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					03/24/17 13:46	04/10/17 10:50	1
Y Carrier	80.7		40 - 110					03/24/17 13:46	04/10/17 10:50	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0722	U	0.250	0.250	5.00	0.449	pCi/L		04/18/17 12:13	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: DUP-2**

**Date Collected: 03/15/17 00:00**

**Date Received: 03/17/17 09:01**

**Lab Sample ID: 400-135240-24**

**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	0.0450	U	0.0762	0.0763	1.00	0.132	pCi/L	03/24/17 13:19	04/17/17 08:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					03/24/17 13:19	04/17/17 08:30	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.161	U	0.207	0.208	1.00	0.400	pCi/L	03/24/17 13:46	04/10/17 10:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					03/24/17 13:46	04/10/17 10:51	1
Y Carrier	82.2		40 - 110					03/24/17 13:46	04/10/17 10:51	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.116	U	0.221	0.222	5.00	0.400	pCi/L		04/18/17 12:13	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Lab Sample ID: 400-135240-26**

Date Collected: 03/17/17 10:00

Matrix: Water

Date Received: 03/18/17 09:51

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.483		0.132	0.139	1.00	0.103	pCi/L	03/24/17 13:19	04/17/17 08:30	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	90.9		40 - 110					03/24/17 13:19	04/17/17 08:30	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.22		0.357	0.374	1.00	0.470	pCi/L	03/24/17 13:46	04/10/17 10:53	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	90.9		40 - 110					03/24/17 13:46	04/10/17 10:53	1
Y Carrier	78.9		40 - 110					03/24/17 13:46	04/10/17 10:53	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.70		0.380	0.399	5.00	0.470	pCi/L		04/18/17 12:13	1



# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

## 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 Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWA-18**

**Date Collected: 03/14/17 10:45**

**Date Received: 03/16/17 09:09**

**Lab Sample ID: 400-135240-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299446	03/24/17 08:27	LDE	TAL SL
Total/NA	Analysis	9315		1	303661	04/17/17 06:22	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299448	03/24/17 08:52	LDE	TAL SL
Total/NA	Analysis	9320		1	302124	04/07/17 11:53	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

**Client Sample ID: WGWA-7**

**Date Collected: 03/14/17 10:50**

**Date Received: 03/16/17 09:09**

**Lab Sample ID: 400-135240-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299446	03/24/17 08:27	LDE	TAL SL
Total/NA	Analysis	9315		1	303661	04/17/17 06:22	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299448	03/24/17 08:52	LDE	TAL SL
Total/NA	Analysis	9320		1	302124	04/07/17 11:53	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

**Client Sample ID: WGWA-3**

**Date Collected: 03/14/17 12:15**

**Date Received: 03/16/17 09:09**

**Lab Sample ID: 400-135240-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299446	03/24/17 08:27	LDE	TAL SL
Total/NA	Analysis	9315		1	303661	04/17/17 06:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299448	03/24/17 08:52	LDE	TAL SL
Total/NA	Analysis	9320		1	302124	04/07/17 11:53	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

**Client Sample ID: WGWA-4**

**Date Collected: 03/14/17 12:15**

**Date Received: 03/16/17 09:09**

**Lab Sample ID: 400-135240-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299446	03/24/17 08:27	LDE	TAL SL
Total/NA	Analysis	9315		1	303661	04/17/17 06:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299448	03/24/17 08:52	LDE	TAL SL
Total/NA	Analysis	9320		1	302124	04/07/17 11:53	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWA-5**

**Lab Sample ID: 400-135240-5**

**Date Collected: 03/14/17 12:40**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299446	03/24/17 08:27	LDE	TAL SL
Total/NA	Analysis	9315		1	303661	04/17/17 06:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299448	03/24/17 08:52	LDE	TAL SL
Total/NA	Analysis	9320		1	302124	04/07/17 11:53	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-135240-6**

**Date Collected: 03/14/17 14:15**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299446	03/24/17 08:27	LDE	TAL SL
Total/NA	Analysis	9315		1	303661	04/17/17 06:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299448	03/24/17 08:52	LDE	TAL SL
Total/NA	Analysis	9320		1	302124	04/07/17 11:53	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-135240-7**

**Date Collected: 03/14/17 14:41**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299446	03/24/17 08:27	LDE	TAL SL
Total/NA	Analysis	9315		1	303661	04/17/17 06:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299448	03/24/17 08:52	LDE	TAL SL
Total/NA	Analysis	9320		1	302124	04/07/17 11:53	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-135240-8**

**Date Collected: 03/14/17 14:50**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299446	03/24/17 08:27	LDE	TAL SL
Total/NA	Analysis	9315		1	303661	04/17/17 06:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299448	03/24/17 08:52	LDE	TAL SL
Total/NA	Analysis	9320		1	302124	04/07/17 11:53	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: FB-1**

**Lab Sample ID: 400-135240-9**

**Date Collected: 03/14/17 12:10**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299446	03/24/17 08:27	LDE	TAL SL
Total/NA	Analysis	9315		1	303661	04/17/17 06:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299448	03/24/17 08:52	LDE	TAL SL
Total/NA	Analysis	9320		1	302124	04/07/17 11:53	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

**Client Sample ID: FERB-1**

**Lab Sample ID: 400-135240-10**

**Date Collected: 03/14/17 12:30**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299446	03/24/17 08:27	LDE	TAL SL
Total/NA	Analysis	9315		1	303661	04/17/17 06:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299448	03/24/17 08:52	LDE	TAL SL
Total/NA	Analysis	9320		1	302124	04/07/17 11:53	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

**Client Sample ID: DUP-1**

**Lab Sample ID: 400-135240-11**

**Date Collected: 03/14/17 00:00**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299446	03/24/17 08:27	LDE	TAL SL
Total/NA	Analysis	9315		1	303661	04/17/17 06:23	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299448	03/24/17 08:52	LDE	TAL SL
Total/NA	Analysis	9320		1	302163	04/07/17 11:49	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

**Client Sample ID: WGWA-1**

**Lab Sample ID: 400-135240-12**

**Date Collected: 03/13/17 15:50**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299446	03/24/17 08:27	LDE	TAL SL
Total/NA	Analysis	9315		1	303661	04/17/17 06:24	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299448	03/24/17 08:52	LDE	TAL SL
Total/NA	Analysis	9320		1	302124	04/07/17 11:54	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWA-2**

**Lab Sample ID: 400-135240-13**

**Date Collected: 03/13/17 16:05**

**Matrix: Water**

**Date Received: 03/16/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299446	03/24/17 08:27	LDE	TAL SL
Total/NA	Analysis	9315		1	303661	04/17/17 06:24	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299448	03/24/17 08:52	LDE	TAL SL
Total/NA	Analysis	9320		1	302124	04/07/17 11:53	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-135240-14**

**Date Collected: 03/15/17 09:20**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299446	03/24/17 08:27	LDE	TAL SL
Total/NA	Analysis	9315		1	303661	04/17/17 06:24	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299448	03/24/17 08:52	LDE	TAL SL
Total/NA	Analysis	9320		1	302124	04/07/17 11:54	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-135240-15**

**Date Collected: 03/15/17 10:05**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299446	03/24/17 08:27	LDE	TAL SL
Total/NA	Analysis	9315		1	303661	04/17/17 06:24	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299448	03/24/17 08:52	LDE	TAL SL
Total/NA	Analysis	9320		1	302163	04/07/17 11:50	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-135240-16**

**Date Collected: 03/15/17 10:15**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299446	03/24/17 08:27	LDE	TAL SL
Total/NA	Analysis	9315		1	303661	04/17/17 06:24	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299448	03/24/17 08:52	LDE	TAL SL
Total/NA	Analysis	9320		1	302163	04/07/17 11:50	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-135240-17**

**Date Collected: 03/15/17 10:20**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299446	03/24/17 08:27	LDE	TAL SL
Total/NA	Analysis	9315		1	303661	04/17/17 06:24	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299448	03/24/17 08:52	LDE	TAL SL
Total/NA	Analysis	9320		1	302163	04/07/17 11:50	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-135240-18**

**Date Collected: 03/15/17 11:20**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299446	03/24/17 08:27	LDE	TAL SL
Total/NA	Analysis	9315		1	303660	04/17/17 05:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299448	03/24/17 08:52	LDE	TAL SL
Total/NA	Analysis	9320		1	302163	04/07/17 11:49	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-135240-19**

**Date Collected: 03/15/17 11:50**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299446	03/24/17 08:27	LDE	TAL SL
Total/NA	Analysis	9315		1	303660	04/17/17 05:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299448	03/24/17 08:52	LDE	TAL SL
Total/NA	Analysis	9320		1	302163	04/07/17 11:49	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-135240-20**

**Date Collected: 03/15/17 11:55**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299446	03/24/17 08:27	LDE	TAL SL
Total/NA	Analysis	9315		1	303660	04/17/17 05:56	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299448	03/24/17 08:52	LDE	TAL SL
Total/NA	Analysis	9320		1	302163	04/07/17 11:49	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-135240-21**

**Date Collected: 03/15/17 14:35**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299579	03/24/17 13:19	LDE	TAL SL
Total/NA	Analysis	9315		1	303660	04/17/17 08:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299581	03/24/17 13:46	LDE	TAL SL
Total/NA	Analysis	9320		1	302721	04/10/17 10:50	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

**Client Sample ID: FB-2**

**Lab Sample ID: 400-135240-22**

**Date Collected: 03/15/17 09:35**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299579	03/24/17 13:19	LDE	TAL SL
Total/NA	Analysis	9315		1	303660	04/17/17 08:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299581	03/24/17 13:46	LDE	TAL SL
Total/NA	Analysis	9320		1	302721	04/10/17 10:50	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

**Client Sample ID: FERB-2**

**Lab Sample ID: 400-135240-23**

**Date Collected: 03/15/17 11:00**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299579	03/24/17 13:19	LDE	TAL SL
Total/NA	Analysis	9315		1	303660	04/17/17 08:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299581	03/24/17 13:46	LDE	TAL SL
Total/NA	Analysis	9320		1	302721	04/10/17 10:50	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

**Client Sample ID: DUP-2**

**Lab Sample ID: 400-135240-24**

**Date Collected: 03/15/17 00:00**

**Matrix: Water**

**Date Received: 03/17/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299579	03/24/17 13:19	LDE	TAL SL
Total/NA	Analysis	9315		1	303660	04/17/17 08:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299581	03/24/17 13:46	LDE	TAL SL
Total/NA	Analysis	9320		1	302721	04/10/17 10:51	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Lab Sample ID: 400-135240-26**

**Date Collected: 03/17/17 10:00**

**Matrix: Water**

**Date Received: 03/18/17 09:51**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			299579	03/24/17 13:19	LDE	TAL SL
Total/NA	Analysis	9315		1	303660	04/17/17 08:30	RTM	TAL SL
Total/NA	Prep	PrecSep_0			299581	03/24/17 13:46	LDE	TAL SL
Total/NA	Analysis	9320		1	302707	04/10/17 10:53	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	304127	04/18/17 12:13	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 Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

## Rad

### Prep Batch: 299446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-1	WGWA-18	Total/NA	Water	PrecSep-21	
400-135240-2	WGWA-7	Total/NA	Water	PrecSep-21	
400-135240-3	WGWA-3	Total/NA	Water	PrecSep-21	
400-135240-4	WGWA-4	Total/NA	Water	PrecSep-21	
400-135240-5	WGWA-5	Total/NA	Water	PrecSep-21	
400-135240-6	WGWC-17	Total/NA	Water	PrecSep-21	
400-135240-7	WGWA-6	Total/NA	Water	PrecSep-21	
400-135240-8	WGWA-15	Total/NA	Water	PrecSep-21	
400-135240-9	FB-1	Total/NA	Water	PrecSep-21	
400-135240-10	FERB-1	Total/NA	Water	PrecSep-21	
400-135240-11	DUP-1	Total/NA	Water	PrecSep-21	
400-135240-12	WGWA-1	Total/NA	Water	PrecSep-21	
400-135240-13	WGWA-2	Total/NA	Water	PrecSep-21	
400-135240-14	WGWC-13	Total/NA	Water	PrecSep-21	
400-135240-15	WGWC-16	Total/NA	Water	PrecSep-21	
400-135240-16	WGWC-11	Total/NA	Water	PrecSep-21	
400-135240-17	WGWC-19	Total/NA	Water	PrecSep-21	
400-135240-18	WGWC-8	Total/NA	Water	PrecSep-21	
400-135240-19	WGWC-10	Total/NA	Water	PrecSep-21	
400-135240-20	WGWC-12	Total/NA	Water	PrecSep-21	
MB 160-299446/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-299446/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-135240-15 DU	WGWC-16	Total/NA	Water	PrecSep-21	
400-135240-20 DU	WGWC-12	Total/NA	Water	PrecSep-21	

### Prep Batch: 299448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-1	WGWA-18	Total/NA	Water	PrecSep_0	
400-135240-2	WGWA-7	Total/NA	Water	PrecSep_0	
400-135240-3	WGWA-3	Total/NA	Water	PrecSep_0	
400-135240-4	WGWA-4	Total/NA	Water	PrecSep_0	
400-135240-5	WGWA-5	Total/NA	Water	PrecSep_0	
400-135240-6	WGWC-17	Total/NA	Water	PrecSep_0	
400-135240-7	WGWA-6	Total/NA	Water	PrecSep_0	
400-135240-8	WGWC-15	Total/NA	Water	PrecSep_0	
400-135240-9	FB-1	Total/NA	Water	PrecSep_0	
400-135240-10	FERB-1	Total/NA	Water	PrecSep_0	
400-135240-11	DUP-1	Total/NA	Water	PrecSep_0	
400-135240-12	WGWA-1	Total/NA	Water	PrecSep_0	
400-135240-13	WGWA-2	Total/NA	Water	PrecSep_0	
400-135240-14	WGWC-13	Total/NA	Water	PrecSep_0	
400-135240-15	WGWC-16	Total/NA	Water	PrecSep_0	
400-135240-16	WGWC-11	Total/NA	Water	PrecSep_0	
400-135240-17	WGWC-19	Total/NA	Water	PrecSep_0	
400-135240-18	WGWC-8	Total/NA	Water	PrecSep_0	
400-135240-19	WGWC-10	Total/NA	Water	PrecSep_0	
400-135240-20	WGWC-12	Total/NA	Water	PrecSep_0	
MB 160-299448/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-299448/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-135240-15 DU	WGWC-16	Total/NA	Water	PrecSep_0	
400-135240-20 DU	WGWC-12	Total/NA	Water	PrecSep_0	

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

## Prep Batch: 299579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-21	WGWC-9	Total/NA	Water	PrecSep-21	
400-135240-22	FB-2	Total/NA	Water	PrecSep-21	
400-135240-23	FERB-2	Total/NA	Water	PrecSep-21	
400-135240-24	DUP-2	Total/NA	Water	PrecSep-21	
400-135240-26	WGWC-14A	Total/NA	Water	PrecSep-21	
MB 160-299579/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-299579/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-299579/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

## Prep Batch: 299581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135240-21	WGWC-9	Total/NA	Water	PrecSep_0	
400-135240-22	FB-2	Total/NA	Water	PrecSep_0	
400-135240-23	FERB-2	Total/NA	Water	PrecSep_0	
400-135240-24	DUP-2	Total/NA	Water	PrecSep_0	
400-135240-26	WGWC-14A	Total/NA	Water	PrecSep_0	
MB 160-299581/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-299581/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-299581/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

## Method: 9315 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-299446/1-A**  
**Matrix: Water**  
**Analysis Batch: 303661**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 299446**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.04950	U	0.0584	0.0586	1.00	0.0952	pCi/L	03/24/17 08:27	04/17/17 06:22	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	40 - 110							
	97.6				03/24/17 08:27	04/17/17 06:22	1			

**Lab Sample ID: LCS 160-299446/2-A**  
**Matrix: Water**  
**Analysis Batch: 303661**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 299446**

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	9.580		1.01	1.00	0.110	pCi/L	84	68 - 137
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier	40 - 110						
	96.2				03/24/17 08:27	04/17/17 06:22	1		

**Lab Sample ID: 400-135240-15 DU**  
**Matrix: Water**  
**Analysis Batch: 303661**

**Client Sample ID: WGWC-16**  
**Prep Type: Total/NA**  
**Prep Batch: 299446**

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.326		0.4401		0.126	1.00	0.0955	pCi/L	0.48	1
Carrier	DU DU		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	40 - 110							
	94.4				03/24/17 08:27	04/17/17 06:22	1			

**Lab Sample ID: 400-135240-20 DU**  
**Matrix: Water**  
**Analysis Batch: 303660**

**Client Sample ID: WGWC-12**  
**Prep Type: Total/NA**  
**Prep Batch: 299446**

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.112		0.1179		0.0726	1.00	0.0938	pCi/L	0.04	1
Carrier	DU DU		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	40 - 110							
	101				03/24/17 13:19	04/17/17 08:28	1			

**Lab Sample ID: MB 160-299579/1-A**  
**Matrix: Water**  
**Analysis Batch: 303660**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 299579**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.02878	U	0.0608	0.0609	1.00	0.110	pCi/L	03/24/17 13:19	04/17/17 08:28	1

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

## Method: 9315 - Radium-226 (GFPC) (Continued)

**Lab Sample ID: MB 160-299579/1-A**  
**Matrix: Water**  
**Analysis Batch: 303660**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 299579**

Carrier	<i>MB</i> %Yield	<i>MB</i> Qualifier	Limits
Ba Carrier	89.4		40 - 110

Prepared	Analyzed	Dil Fac
03/24/17 13:19	04/17/17 08:28	1

**Lab Sample ID: LCS 160-299579/2-A**  
**Matrix: Water**  
**Analysis Batch: 303660**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 299579**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.8	9.400		1.00	1.00	0.115	pCi/L	80	68 - 137

Carrier	<i>LCS</i> %Yield	<i>LCS</i> Qualifier	Limits
Ba Carrier	92.6		40 - 110

**Lab Sample ID: LCSD 160-299579/3-A**  
**Matrix: Water**  
**Analysis Batch: 303660**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 299579**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.8	9.188		0.985	1.00	0.127	pCi/L	78	68 - 137	0.11	1

Carrier	<i>LCSD</i> %Yield	<i>LCSD</i> Qualifier	Limits
Ba Carrier	93.5		40 - 110

## Method: 9320 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-299448/1-A**  
**Matrix: Water**  
**Analysis Batch: 302124**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 299448**

Analyte	<i>MB</i> Result	<i>MB</i> Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1900	U	0.253	0.254	1.00	0.421	pCi/L	03/24/17 08:52	04/07/17 11:52	1

Carrier	<i>MB</i> %Yield	<i>MB</i> Qualifier	Limits
Ba Carrier	97.6		40 - 110
Y Carrier	79.3		40 - 110

Prepared	Analyzed	Dil Fac
03/24/17 08:52	04/07/17 11:52	1
03/24/17 08:52	04/07/17 11:52	1

**Lab Sample ID: LCS 160-299448/2-A**  
**Matrix: Water**  
**Analysis Batch: 302124**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 299448**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.6	14.69		1.57	1.00	0.398	pCi/L	108	56 - 140

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

## Method: 9320 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-299448/2-A**  
**Matrix: Water**  
**Analysis Batch: 302124**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 299448**

	LCS %Yield	LCS Qualifier	Limits
Carrier			
Ba Carrier	96.2		40 - 110
Y Carrier	85.2		40 - 110

**Lab Sample ID: 400-135240-15 DU**  
**Matrix: Water**  
**Analysis Batch: 302163**

**Client Sample ID: WGWC-16**  
**Prep Type: Total/NA**  
**Prep Batch: 299448**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	1.31		1.177		0.327	1.00	0.397	pCi/L	0.20	1
Carrier										
	DU %Yield	DU Qualifier	Limits							
Ba Carrier	94.4		40 - 110							
Y Carrier	90.1		40 - 110							

**Lab Sample ID: 400-135240-20 DU**  
**Matrix: Water**  
**Analysis Batch: 302163**

**Client Sample ID: WGWC-12**  
**Prep Type: Total/NA**  
**Prep Batch: 299448**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.142	U	0.2687	U	0.216	1.00	0.340	pCi/L	0.29	1
Carrier										
	DU %Yield	DU Qualifier	Limits							
Ba Carrier	101		40 - 110							
Y Carrier	86.4		40 - 110							

**Lab Sample ID: MB 160-299581/1-A**  
**Matrix: Water**  
**Analysis Batch: 302721**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 299581**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2658	U	0.268	0.269	1.00	0.436	pCi/L	03/24/17 13:46	04/10/17 10:48	1
Carrier										
	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac				
Ba Carrier	89.4		40 - 110	03/24/17 13:46	04/10/17 10:48	1				
Y Carrier	77.8		40 - 110	03/24/17 13:46	04/10/17 10:48	1				

**Lab Sample ID: LCS 160-299581/2-A**  
**Matrix: Water**  
**Analysis Batch: 302721**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 299581**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	13.6	16.07		1.71	1.00	0.421	pCi/L	118	56 - 140

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-135240-2  
 SDG: Ash Pond

## Method: 9320 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-299581/2-A**  
**Matrix: Water**  
**Analysis Batch: 302721**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 299581**

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	92.6		40 - 110
Y Carrier	83.4		40 - 110

**Lab Sample ID: LCSD 160-299581/3-A**  
**Matrix: Water**  
**Analysis Batch: 302721**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 299581**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		RER	RER Limit
									56 - 140	0.15	1	
Radium-228	13.6	16.60		1.76	1.00	0.410	pCi/L	122				

	LCSD	LCSD	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	93.5		40 - 110
Y Carrier	80.0		40 - 110

## Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

**Lab Sample ID: 400-135240-15 DU**  
**Matrix: Water**  
**Analysis Batch: 304127**

**Client Sample ID: WGWC-16**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
										0.03
Combined Radium 226 + 228	1.64		1.617		0.350	5.00	0.397	pCi/L		

**Lab Sample ID: 400-135240-20 DU**  
**Matrix: Water**  
**Analysis Batch: 304127**

**Client Sample ID: WGWC-12**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
									0.29	
Combined Radium 226 + 228	0.254	U	0.3866		0.228	5.00	0.340	pCi/L		

TestAmerica Pensacola  
 3355 McClamore Drive  
 Pensacola, FL 32514  
 Phone (850) 474-1001 Fax (850) 478-2671

Client Information:  
 Client Contact: Joju Abraham  
 Company: Southern Company  
 Address: 2411 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State: GA, 30308  
 Phone: 404-508-7289  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Size: CCR

Sampler: T. Payne, T. M. Thomas Jr, C. Hurdle  
 Lab P/N: Whitliffe, Cheyenne R  
 Phone: cheyenne.whitliffe@testamericainc.com

Due Date Requested:  
 TAT Requested (days):  
 PO #:  
 WO #:  
 Project #:  
 SSO#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (Prevalence, Spoiler, Opportunistic, Other)	Analysis Requested		Special Instructions/Note
					Method	Code	
WGWA-18	3/14/17	1045	G	W	TDS - SM 2840C, Cl, F, SO4 - EPA 300	Methals - Part 267 Appendix III & IV EPA 8020 & EPA 7470	Radium 226 & 228 - SW-1418 8316 & 8320
WGWA-7	3/14/17	1050	G	W			
WGWA-3	3/14/17	1215	G	W			
WGWA-4	3/14/17	1215	G	W			
WGWA-5	3/14/17	1240	G	W			
WGWC-17	3/14/17	1415	G	W			
WGWA-6	3/14/17	1441	G	W			
WGWC-15	3/14/17	1450	G	W			
FB-1	3/14/17	1210	G	W			400-135240 COC
FERB-1	3/14/17	1230	G	W			
DUP-1	3/14/17	-	G	W			

Preservation Codes:  
 M - Hexane  
 N - None  
 O - ASHCO2  
 P - N2SO3  
 Q - N2SO3  
 R - N2SO3  
 S - H2SO4  
 T - TSP Dodecylhydrate  
 U - Acetone  
 V - MCAA  
 W - pH 4.5  
 X - EDTA  
 Y - EDA  
 Z - other (specify)

Analysis Requested:  
 TDS - SM 2840C, Cl, F, SO4 - EPA 300  
 Methals - Part 267 Appendix III & IV EPA 8020 & EPA 7470  
 Radium 226 & 228 - SW-1418 8316 & 8320

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  
 Disposal By Lab  
 Special Instructions/OC Requirements:

Empty Kit Relinquished By:  
 Relinquished By: [Signature]  
 Relinquished By: [Signature]  
 Relinquished By: [Signature]

Custody Seals Intact:  
 Yes  No

Date: 3/15/17 1250  
 Date: 3/15/17 1600  
 Date: 3/16/17 909

Company: [Blank]  
 Company: [Blank]  
 Company: TA-PEN

Method of Shipment:  
 Cooler Temperature(s) °C and Other Remarks: 0.0°C, 2.2°C

TestAmerica Pensacola  
 3355 McLemore Drive  
 Pensacola, FL 32514  
 Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica

Client Information

Client Contact: Jolij Abraham  
 Southern Company  
 Address: 2411 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State: GA 30308  
 Phone: 404-606-7238  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

Carrier Tracking Note(s)

Lab Pk:  
 Whitmore, Cheyenne R  
 E-Mail: cheyenne.whitmore@testamericainc.com

COOC No:

Page:

Job #:

Due Date Requested:

LAB Requested (days):

PO #:

WO #:

Project #:

SSOW#:

Analysis Requested

TDS - SM 240C: Cl, F, SO4, EPA 300	X	X	X	X	X
Metals - (Part 267 Appendix III & IV) EPA 6020 & EPA 7470	X	X	X	X	X
Radium 226 & 228 - GW-646 9316 & 9320	X	X	X	X	X

Preservation Codes:  
 A - HCL  
 B - NaOH  
 C - Zn Acetate  
 D - Nitric Acid  
 E - NaHSO4  
 F - MeOH  
 G - Anichlor  
 H - Ascorbic Acid  
 I - Ice  
 J - DI Water  
 K - EDTA  
 L - EDA  
 Other:  
 M - Hexane  
 N - None  
 O - AshAD2  
 P - Na2OAS  
 Q - Na2SO3  
 R - Na2S2O3  
 S - H2SO4  
 T - TSP Dodecahydrate  
 U - Acetone  
 V - MCAA  
 W - pH 4-5  
 X - EDTA  
 Z - other (specify)

Special Instructions/Notes:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, S=Sub)	Matrix (N=Non-hazardous, S=Soil, O=Organic, In=Inorganic, J=Jelly)	Method of Shipment
WGWA-1	3/13/17	1550	S	W	Return To Client
WGWA-2	3/13/17	1605	S	W	Return To Client

Possible Hazard Identification

Non-Hazard  
 Flammable  
 Skin Irritant  
 Poison B  
 Unknown  
 Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by:

Relinquished by:

Relinquished by:

Relinquished by:

Custody Seals Intact:  
 Yes  No

Custody Seal No.:

Received by:	Date/Time:	Company:
<i>[Signature]</i>	3/15/17 1250	Company PA
Received by:	Date/Time:	Company:
<i>[Signature]</i>	3/15/17 1600	Company PA
Received by:	Date/Time:	Company:
<i>[Signature]</i>	3/16/17 909	Company TA-PEN





**TestAmerica Pensacola**  
 3355 McLemore Drive  
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**Chain of Custody Record**

**TestAmerica**

Client Information  
 Client Contact: Joju Abraham  
 Lab POC: C. Hurdle CH.T. Payne TP, M. Thomas MT, J. Morrison JM, W. Whitmore, Cheyenne R  
 E-Mail: cheyenne.whitmore@testamerica.com

Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: J.Abraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

Due Date Requested:  
 TAT Requested (days):  
 PO #:  
 W/O #:  
 Project #:  
 SSON#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (W=Water, S=Soil, O=Other)
WGWC-13	3/15/17	0920	G	W
WGWC-16	3/15/17	1005	G	W
WGWC-11	3/15/17	1015	G	W
WGWC-19	3/15/17	1020	G	W
WGWC-6	3/15/17	1120	G	W
WGWC-10	3/15/17	1150	G	W
WGWC-12	3/15/17	1155	G	W
WGWC-9	3/15/17	1435	G	W
FERB-2	3/15/17	0935	G	W
FERB-2	3/15/17	1100	G	W
DUP-2	3/15/17	-	G	W

Special Instructions/Notes:
Extra radium bottle collected for lab OAAQC
Extra radium bottle collected for lab OAAQC

Analysis Requested	Method	Result
TDS - SM 2640C : Cl, F, SO4 - EPA 810	X	X
Metals - (Part 267 Appendix III & IV) EPA 6020 & EPA 7470	X	X
Radium 226 & 228 - SM 418 9315 & 9320	X	X

Carrier Tracking Note(s):  
 Preservation Codes:  
 A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NH4SO4, F - MeOH, G - Amalhor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, Other:  
 M - Hexane, N - None, O - AsAc2O, P - Na2OAS, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Possible Hazard Identification  
 Non-Hazard  Flammable  Skin Irritant  
 Deliverable Requested: I, II, III, IV, Other (specify)  
 Empty Kit Relinquished by: [Signature]  
 Relinquished by: [Signature]  
 Relinquished by: [Signature]  
 Relinquished by: [Signature]  
 Date: 3/16/17 1300  
 Date: 3/16/17 1700  
 Date: 3/16/17 1300  
 Date: 3/17/17 901  
 Company: [Blank]  
 Company: [Blank]  
 Company: THA-PEN  
 Company: [Blank]  
 Custody Seal No.:  
 A Yes A No  
 Cooler Temperature(s) and Other Remarks: 2.0°C, 2.9°C - IP2

681-A1818



**Chain of Custody Record**

**TestAmerica Pensacola**  
3855 McLemore Drive  
Pensacola, FL 32514  
Phone (850) 474-1001 Fax (850) 478-2671

**Client Information**  
 Company: Joju Abraham  
 Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State: GA Zip: 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

**Lab Info:** Lab Pk: Whitmire, Cheyenne R  
 E-Mail: cheyenne.whitmire@testamericainc.com  
**Carrier Tracking No(s):**

**Due Date Requested:**  
 TAT Requested (days):  
 PO #:  
 WO #:  
 Project #:  
 SOW#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, C=creosote/oil, BT=Tissue, A=air)	Analysis Requested	Special Instructions/Note:
WGW-14A	3/17/17	1000	G	W	TDS - SM 2640C (Cl, F, SO4 - EPA 800 Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470 Radium 226 & 228 - SM-266 9316 & 9320	Preservation Codes: A - HCl B - MeOH 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 - Na2O/S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - NCA W - pH 4.5 Z - other (specify)

**Possible Hazard Identification**  
 Non-Hazard  
 Flammable  
 Skin Irritant  
 Polson B  
 Unknown  
 Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)  
 Empty Kit Relinquished by:

**Relinquished by:** [Signature] Date: 3/17/17 1610  
**Received by:** [Signature] Date: 3/17/17 1610  
**Relinquished by:** [Signature] Date: 3/17/17 1930  
**Received by:** [Signature] Date: 3/17/17 1930  
 Cooler Temperature(s) and Other Details: [Signature]

## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-135240-2

SDG Number: Ash Pond

**Login Number: 135240**

**List Number: 1**

**Creator: Hughes, Nicholas T**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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	0.0°C, 2.2°C - IR7 / 2.0°C, 2.9°C - IR2, 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.	False	WGWC-19 1 liter unpreserved received half full with loose lid.
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 Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

## 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 Wansley

TestAmerica Job ID: 400-135240-2  
SDG: Ash Pond

## 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: 400-136546-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Plant Wansley

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

4/30/2017 1:30:23 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

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[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

**Job ID: 400-136546-1**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-136546-1

#### Metals

Method(s) 6020: The native sample and post digestion spike (PDS) associated with preparation batch 350111 and analytical batch 350346 were performed at the same dilution. Due to the additional level of analyte present in the post spike, the concentration of Molybdenum in the PDS was above the instrument calibration range. The data has been reported accordingly.

Method(s) 6020: The reporting limit check (CRI) for analytical batch 351778 contained Lead above the recovery limit. All reported samples were either ND for this analyte; therefore, re-analysis of samples was not performed.

Method(s) 6020: The continuing calibration blank (CCB) for analytical batch 351778 contained Lead above the reporting limit (RL). All reported samples associated with this CCB were ND for this analyte; therefore, re-analysis of samples was not performed.



# Detection Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

## Client Sample ID: WGWC-14A

## Lab Sample ID: 400-136546-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.8		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	13		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	4.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.016		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Arsenic - RA	0.0032		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium - RA	0.055		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	76		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-19

## Lab Sample ID: 400-136546-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.3		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.37		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	3.2		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	11		0.25	0.13	mg/L	5		6020	Total Recoverable
Barium - RA	0.0014	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Lithium - RA	0.048		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	68		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-9

## Lab Sample ID: 400-136546-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.2		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	1.4		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	36		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	8.6		0.25	0.13	mg/L	5		6020	Total Recoverable
Molybdenum	0.0047	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0023		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Barium - RA	0.00070	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron - RA	0.37		0.050	0.021	mg/L	5		6020	Total Recoverable
Lithium - RA	0.034		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	120		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FB-1

## Lab Sample ID: 400-136546-4

No Detections.

## Client Sample ID: FERB-1

## Lab Sample ID: 400-136546-5

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

## Client Sample ID: FERB-1 (Continued)

## Lab Sample ID: 400-136546-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	0.0035	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0018		0.0013	0.00024	mg/L	5		6020	Total Recoverable

## Client Sample ID: DUP-1

## Lab Sample ID: 400-136546-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.2		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	1.4		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	35		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00063	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.00095	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00034	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Boron	0.37		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	7.6		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.031		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0059	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0028		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	150		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Method Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN

### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-136546-1	WGWC-14A	Water	04/11/17 14:05	04/13/17 09:01
400-136546-2	WGWC-19	Water	04/11/17 14:07	04/13/17 09:01
400-136546-3	WGWC-9	Water	04/11/17 15:28	04/13/17 09:01
400-136546-4	FB-1	Water	04/11/17 13:45	04/13/17 09:01
400-136546-5	FERB-1	Water	04/11/17 14:50	04/13/17 09:01
400-136546-6	DUP-1	Water	04/11/17 00:00	04/13/17 09:01

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# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Lab Sample ID: 400-136546-1**

**Date Collected: 04/11/17 14:05**

**Matrix: Water**

**Date Received: 04/13/17 09:01**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.8</b>		1.0	0.89	mg/L			04/20/17 06:33	1
Fluoride	<0.082		0.20	0.082	mg/L			04/20/17 06:33	1
<b>Sulfate</b>	<b>13</b>		1.0	0.70	mg/L			04/20/17 06:33	1

### 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		04/17/17 16:17	04/18/17 19:08	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/17/17 16:17	04/18/17 19:08	5
<b>Calcium</b>	<b>4.1</b>		0.25	0.13	mg/L		04/17/17 16:17	04/18/17 19:08	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/17/17 16:17	04/18/17 19:08	5
<b>Cobalt</b>	<b>0.016</b>		0.0025	0.00040	mg/L		04/17/17 16:17	04/18/17 19:08	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/17/17 16:17	04/18/17 19:08	5

### Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Arsenic</b>	<b>0.0032</b>		0.0013	0.00046	mg/L		04/17/17 16:17	04/26/17 16:39	5
<b>Barium</b>	<b>0.055</b>		0.0025	0.00049	mg/L		04/17/17 16:17	04/26/17 16:39	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/17/17 16:17	04/26/17 16:39	5
Boron	<0.021		0.050	0.021	mg/L		04/17/17 16:17	04/26/17 16:39	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/17/17 16:17	04/26/17 16:39	5
Lithium	<0.0032		0.0050	0.0032	mg/L		04/17/17 16:17	04/26/17 16:39	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/17/17 16:17	04/26/17 16:39	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/17/17 16:17	04/26/17 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		04/24/17 12:51	04/25/17 13:46	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>76</b>		5.0	3.4	mg/L			04/15/17 17:15	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-136546-2**

Date Collected: 04/11/17 14:07

Matrix: Water

Date Received: 04/13/17 09:01

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.3		1.0	0.89	mg/L			04/20/17 07:19	1
Fluoride	0.37		0.20	0.082	mg/L			04/20/17 07:19	1
Sulfate	3.2		1.0	0.70	mg/L			04/20/17 07:19	1

**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		04/17/17 16:17	04/18/17 19:13	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/17/17 16:17	04/18/17 19:13	5
Calcium	11		0.25	0.13	mg/L		04/17/17 16:17	04/18/17 19:13	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/17/17 16:17	04/18/17 19:13	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/17/17 16:17	04/18/17 19:13	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/17/17 16:17	04/18/17 19:13	5

**Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/17/17 16:17	04/26/17 16:43	5
Barium	0.0014	J	0.0025	0.00049	mg/L		04/17/17 16:17	04/26/17 16:43	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/17/17 16:17	04/26/17 16:43	5
Boron	<0.021		0.050	0.021	mg/L		04/17/17 16:17	04/26/17 16:43	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/17/17 16:17	04/26/17 16:43	5
Lithium	0.048		0.0050	0.0032	mg/L		04/17/17 16:17	04/26/17 16:43	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/17/17 16:17	04/26/17 16:43	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/17/17 16:17	04/26/17 16:43	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		04/24/17 12:51	04/25/17 14:07	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	68		5.0	3.4	mg/L			04/15/17 17:15	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-136546-3**

**Date Collected: 04/11/17 15:28**

**Matrix: Water**

**Date Received: 04/13/17 09:01**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.2		1.0	0.89	mg/L			04/20/17 07:41	1
Fluoride	1.4		0.20	0.082	mg/L			04/20/17 07:41	1
Sulfate	36		1.0	0.70	mg/L			04/20/17 07:41	1

### 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		04/17/17 16:17	04/18/17 19:40	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/17/17 16:17	04/18/17 19:40	5
Calcium	8.6		0.25	0.13	mg/L		04/17/17 16:17	04/18/17 19:40	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/17/17 16:17	04/18/17 19:40	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/17/17 16:17	04/18/17 19:40	5
Molybdenum	0.0047	J	0.015	0.00085	mg/L		04/17/17 16:17	04/18/17 19:40	5
Selenium	0.0023		0.0013	0.00024	mg/L		04/17/17 16:17	04/18/17 19:40	5

### Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/17/17 16:17	04/26/17 16:47	5
Barium	0.00070	J	0.0025	0.00049	mg/L		04/17/17 16:17	04/26/17 16:47	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/17/17 16:17	04/26/17 16:47	5
Boron	0.37		0.050	0.021	mg/L		04/17/17 16:17	04/26/17 16:47	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/17/17 16:17	04/26/17 16:47	5
Lithium	0.034		0.0050	0.0032	mg/L		04/17/17 16:17	04/26/17 16:47	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/17/17 16:17	04/26/17 16:47	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		04/24/17 12:51	04/25/17 14:09	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	120		5.0	3.4	mg/L			04/15/17 17:15	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

**Client Sample ID: FB-1**  
**Date Collected: 04/11/17 13:45**  
**Date Received: 04/13/17 09:01**

**Lab Sample ID: 400-136546-4**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			04/20/17 08:04	1
Fluoride	<0.082		0.20	0.082	mg/L			04/20/17 08:04	1
Sulfate	<0.70		1.0	0.70	mg/L			04/20/17 08:04	1

### 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		04/17/17 16:17	04/18/17 19:44	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/17/17 16:17	04/18/17 19:44	5
Calcium	<0.13		0.25	0.13	mg/L		04/17/17 16:17	04/18/17 19:44	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/17/17 16:17	04/18/17 19:44	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/17/17 16:17	04/18/17 19:44	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/17/17 16:17	04/18/17 19:44	5

### Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/17/17 16:17	04/26/17 16:53	5
Barium	<0.00049		0.0025	0.00049	mg/L		04/17/17 16:17	04/26/17 16:53	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/17/17 16:17	04/26/17 16:53	5
Boron	<0.021		0.050	0.021	mg/L		04/17/17 16:17	04/26/17 16:53	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/17/17 16:17	04/26/17 16:53	5
Lithium	<0.0032		0.0050	0.0032	mg/L		04/17/17 16:17	04/26/17 16:53	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/17/17 16:17	04/26/17 16:53	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/17/17 16:17	04/26/17 16:53	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		04/24/17 12:51	04/25/17 14:11	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			04/15/17 17:15	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

**Client Sample ID: FERB-1**

**Date Collected: 04/11/17 14:50**

**Date Received: 04/13/17 09:01**

**Lab Sample ID: 400-136546-5**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			04/20/17 08:27	1
Fluoride	<0.082		0.20	0.082	mg/L			04/20/17 08:27	1
Sulfate	<0.70		1.0	0.70	mg/L			04/20/17 08:27	1

### 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		04/18/17 15:16	04/28/17 13:23	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/18/17 15:16	04/28/17 13:23	5
Barium	<0.00049		0.0025	0.00049	mg/L		04/18/17 15:16	04/28/17 13:23	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/18/17 15:16	04/28/17 13:23	5
Boron	<0.021		0.050	0.021	mg/L		04/18/17 15:16	04/28/17 13:23	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/18/17 15:16	04/28/17 13:23	5
Calcium	<0.13		0.25	0.13	mg/L		04/18/17 15:16	04/28/17 13:23	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/18/17 15:16	04/28/17 13:23	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/18/17 15:16	04/28/17 13:23	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		04/18/17 15:16	04/28/17 13:23	5
Lithium	<0.0032		0.0050	0.0032	mg/L		04/18/17 15:16	04/28/17 13:23	5
<b>Molybdenum</b>	<b>0.0035</b>	<b>J</b>	0.015	0.00085	mg/L		04/18/17 15:16	04/28/17 13:23	5
<b>Selenium</b>	<b>0.0018</b>		0.0013	0.00024	mg/L		04/18/17 15:16	04/28/17 13:23	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/18/17 15:16	04/28/17 13:23	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		04/24/17 12:51	04/25/17 14:12	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			04/15/17 17:15	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

**Client Sample ID: DUP-1**  
**Date Collected: 04/11/17 00:00**  
**Date Received: 04/13/17 09:01**

**Lab Sample ID: 400-136546-6**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.2		1.0	0.89	mg/L			04/20/17 08:50	1
Fluoride	1.4		0.20	0.082	mg/L			04/20/17 08:50	1
Sulfate	35		1.0	0.70	mg/L			04/20/17 08:50	1

### 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		04/18/17 15:16	04/28/17 14:04	5
Arsenic	0.00063	J	0.0013	0.00046	mg/L		04/18/17 15:16	04/28/17 14:04	5
Barium	0.00095	J	0.0025	0.00049	mg/L		04/18/17 15:16	04/28/17 14:04	5
Beryllium	0.00034	J	0.0025	0.00034	mg/L		04/18/17 15:16	04/28/17 14:04	5
Boron	0.37		0.050	0.021	mg/L		04/18/17 15:16	04/28/17 14:04	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/18/17 15:16	04/28/17 14:04	5
Calcium	7.6		0.25	0.13	mg/L		04/18/17 15:16	04/28/17 14:04	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/18/17 15:16	04/28/17 14:04	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/18/17 15:16	04/28/17 14:04	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		04/18/17 15:16	04/28/17 14:04	5
Lithium	0.031		0.0050	0.0032	mg/L		04/18/17 15:16	04/28/17 14:04	5
Molybdenum	0.0059	J	0.015	0.00085	mg/L		04/18/17 15:16	04/28/17 14:04	5
Selenium	0.0028		0.0013	0.00024	mg/L		04/18/17 15:16	04/28/17 14:04	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/18/17 15:16	04/28/17 14:04	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		04/24/17 12:51	04/25/17 14:14	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	150		5.0	3.4	mg/L			04/15/17 16:01	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

## Qualifiers

### HPLC/IC

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.

### 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.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, 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 Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Date Collected: 04/11/17 14:05**

**Date Received: 04/13/17 09:01**

**Lab Sample ID: 400-136546-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	350529	04/20/17 06:33	KH1	TAL PEN
Total Recoverable	Prep	3005A			350111	04/17/17 16:17	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	350346	04/18/17 19:08	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		350111	04/17/17 16:17	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	351496	04/26/17 16:39	DRE	TAL PEN
Total/NA	Prep	7470A			351012	04/24/17 12:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	351281	04/25/17 13:46	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	349919	04/15/17 17:15	TET	TAL PEN

**Client Sample ID: WGWC-19**

**Date Collected: 04/11/17 14:07**

**Date Received: 04/13/17 09:01**

**Lab Sample ID: 400-136546-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	350529	04/20/17 07:19	KH1	TAL PEN
Total Recoverable	Prep	3005A			350111	04/17/17 16:17	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	350346	04/18/17 19:13	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		350111	04/17/17 16:17	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	351496	04/26/17 16:43	DRE	TAL PEN
Total/NA	Prep	7470A			351012	04/24/17 12:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	351281	04/25/17 14:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	349919	04/15/17 17:15	TET	TAL PEN

**Client Sample ID: WGWC-9**

**Date Collected: 04/11/17 15:28**

**Date Received: 04/13/17 09:01**

**Lab Sample ID: 400-136546-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	350529	04/20/17 07:41	KH1	TAL PEN
Total Recoverable	Prep	3005A			350111	04/17/17 16:17	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	350346	04/18/17 19:40	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		350111	04/17/17 16:17	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	351496	04/26/17 16:47	DRE	TAL PEN
Total/NA	Prep	7470A			351012	04/24/17 12:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	351281	04/25/17 14:09	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	349919	04/15/17 17:15	TET	TAL PEN

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

**Client Sample ID: FB-1**

**Lab Sample ID: 400-136546-4**

**Date Collected: 04/11/17 13:45**

**Matrix: Water**

**Date Received: 04/13/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	350529	04/20/17 08:04	KH1	TAL PEN
Total Recoverable	Prep	3005A			350111	04/17/17 16:17	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	350346	04/18/17 19:44	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		350111	04/17/17 16:17	DRE	TAL PEN
Total Recoverable	Analysis	6020	RA	5	351496	04/26/17 16:53	DRE	TAL PEN
Total/NA	Prep	7470A			351012	04/24/17 12:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	351281	04/25/17 14:11	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	349919	04/15/17 17:15	TET	TAL PEN

**Client Sample ID: FERB-1**

**Lab Sample ID: 400-136546-5**

**Date Collected: 04/11/17 14:50**

**Matrix: Water**

**Date Received: 04/13/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	350529	04/20/17 08:27	KH1	TAL PEN
Total Recoverable	Prep	3005A			350289	04/18/17 15:16	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	351778	04/28/17 13:23	DRE	TAL PEN
Total/NA	Prep	7470A			351012	04/24/17 12:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	351281	04/25/17 14:12	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	349919	04/15/17 17:15	TET	TAL PEN

**Client Sample ID: DUP-1**

**Lab Sample ID: 400-136546-6**

**Date Collected: 04/11/17 00:00**

**Matrix: Water**

**Date Received: 04/13/17 09:01**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	350529	04/20/17 08:50	KH1	TAL PEN
Total Recoverable	Prep	3005A			350289	04/18/17 15:16	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	351778	04/28/17 14:04	DRE	TAL PEN
Total/NA	Prep	7470A			351012	04/24/17 12:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	351281	04/25/17 14:14	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	349918	04/15/17 16:01	TET	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 Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

## HPLC/IC

### Analysis Batch: 350529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136546-1	WGWC-14A	Total/NA	Water	300.0	
400-136546-2	WGWC-19	Total/NA	Water	300.0	
400-136546-3	WGWC-9	Total/NA	Water	300.0	
400-136546-4	FB-1	Total/NA	Water	300.0	
400-136546-5	FERB-1	Total/NA	Water	300.0	
400-136546-6	DUP-1	Total/NA	Water	300.0	
MB 400-350529/34	Method Blank	Total/NA	Water	300.0	
LCS 400-350529/35	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-350529/36	Lab Control Sample Dup	Total/NA	Water	300.0	
400-136455-A-29 MS	Matrix Spike	Total/NA	Water	300.0	
400-136455-A-29 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

## Metals

### Prep Batch: 350111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136546-1	WGWC-14A	Total Recoverable	Water	3005A	
400-136546-1 - RA	WGWC-14A	Total Recoverable	Water	3005A	
400-136546-2 - RA	WGWC-19	Total Recoverable	Water	3005A	
400-136546-2	WGWC-19	Total Recoverable	Water	3005A	
400-136546-3	WGWC-9	Total Recoverable	Water	3005A	
400-136546-3 - RA	WGWC-9	Total Recoverable	Water	3005A	
400-136546-4	FB-1	Total Recoverable	Water	3005A	
400-136546-4 - RA	FB-1	Total Recoverable	Water	3005A	
MB 400-350111/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-350111/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-136455-B-20-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-136455-B-20-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Prep Batch: 350289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136546-5	FERB-1	Total Recoverable	Water	3005A	
400-136546-6	DUP-1	Total Recoverable	Water	3005A	
MB 400-350289/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-350289/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-136546-5 MS	FERB-1	Total Recoverable	Water	3005A	
400-136546-5 MSD	FERB-1	Total Recoverable	Water	3005A	

### Analysis Batch: 350346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136546-1	WGWC-14A	Total Recoverable	Water	6020	350111
400-136546-2	WGWC-19	Total Recoverable	Water	6020	350111
400-136546-3	WGWC-9	Total Recoverable	Water	6020	350111
400-136546-4	FB-1	Total Recoverable	Water	6020	350111
MB 400-350111/1-A ^5	Method Blank	Total Recoverable	Water	6020	350111
LCS 400-350111/2-A	Lab Control Sample	Total Recoverable	Water	6020	350111
400-136455-B-20-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	350111
400-136455-B-20-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	350111

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

## Metals (Continued)

### Prep Batch: 351012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136546-1	WGWC-14A	Total/NA	Water	7470A	
400-136546-2	WGWC-19	Total/NA	Water	7470A	
400-136546-3	WGWC-9	Total/NA	Water	7470A	
400-136546-4	FB-1	Total/NA	Water	7470A	
400-136546-5	FERB-1	Total/NA	Water	7470A	
400-136546-6	DUP-1	Total/NA	Water	7470A	
MB 400-351012/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-351012/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-136519-E-1-C MS	Matrix Spike	Total/NA	Water	7470A	
400-136519-E-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

### Analysis Batch: 351281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136546-1	WGWC-14A	Total/NA	Water	7470A	351012
400-136546-2	WGWC-19	Total/NA	Water	7470A	351012
400-136546-3	WGWC-9	Total/NA	Water	7470A	351012
400-136546-4	FB-1	Total/NA	Water	7470A	351012
400-136546-5	FERB-1	Total/NA	Water	7470A	351012
400-136546-6	DUP-1	Total/NA	Water	7470A	351012
MB 400-351012/14-A	Method Blank	Total/NA	Water	7470A	351012
LCS 400-351012/15-A	Lab Control Sample	Total/NA	Water	7470A	351012
400-136519-E-1-C MS	Matrix Spike	Total/NA	Water	7470A	351012
400-136519-E-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	351012

### Analysis Batch: 351496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136546-1 - RA	WGWC-14A	Total Recoverable	Water	6020	350111
400-136546-2 - RA	WGWC-19	Total Recoverable	Water	6020	350111
400-136546-3 - RA	WGWC-9	Total Recoverable	Water	6020	350111
400-136546-4 - RA	FB-1	Total Recoverable	Water	6020	350111

### Analysis Batch: 351778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136546-5	FERB-1	Total Recoverable	Water	6020	350289
400-136546-6	DUP-1	Total Recoverable	Water	6020	350289
MB 400-350289/1-A ^5	Method Blank	Total Recoverable	Water	6020	350289
LCS 400-350289/2-A	Lab Control Sample	Total Recoverable	Water	6020	350289
400-136546-5 MS	FERB-1	Total Recoverable	Water	6020	350289
400-136546-5 MSD	FERB-1	Total Recoverable	Water	6020	350289

## General Chemistry

### Analysis Batch: 349918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136546-6	DUP-1	Total/NA	Water	SM 2540C	
MB 400-349918/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-349918/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-136554-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

## General Chemistry (Continued)

### Analysis Batch: 349919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136546-1	WGWC-14A	Total/NA	Water	SM 2540C	
400-136546-2	WGWC-19	Total/NA	Water	SM 2540C	
400-136546-3	WGWC-9	Total/NA	Water	SM 2540C	
400-136546-4	FB-1	Total/NA	Water	SM 2540C	
400-136546-5	FERB-1	Total/NA	Water	SM 2540C	
MB 400-349919/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-349919/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-136546-1 DU	WGWC-14A	Total/NA	Water	SM 2540C	



# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 400-350529/34**  
**Matrix: Water**  
**Analysis Batch: 350529**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			04/19/17 23:19	1
Fluoride	<0.082		0.20	0.082	mg/L			04/19/17 23:19	1
Sulfate	<0.70		1.0	0.70	mg/L			04/19/17 23:19	1

**Lab Sample ID: LCS 400-350529/35**  
**Matrix: Water**  
**Analysis Batch: 350529**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.88		mg/L		99	90 - 110
Fluoride	10.0	10.2		mg/L		102	90 - 110
Sulfate	10.0	9.38		mg/L		94	90 - 110

**Lab Sample ID: LCSD 400-350529/36**  
**Matrix: Water**  
**Analysis Batch: 350529**

**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	10.0	9.87		mg/L		99	90 - 110	0	15
Fluoride	10.0	10.2		mg/L		102	90 - 110	0	15
Sulfate	10.0	9.33		mg/L		93	90 - 110	1	15

**Lab Sample ID: 400-136455-A-29 MS**  
**Matrix: Water**  
**Analysis Batch: 350529**

**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	10		10.0	19.3		mg/L		91	80 - 120
Fluoride	0.20		10.0	10.3		mg/L		101	80 - 120
Sulfate	200	E	10.0	213	E 4	mg/L		98	80 - 120

**Lab Sample ID: 400-136455-A-29 MSD**  
**Matrix: Water**  
**Analysis Batch: 350529**

**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	10		10.0	19.4		mg/L		92	80 - 120	0	20
Fluoride	0.20		10.0	10.4		mg/L		102	80 - 120	0	20
Sulfate	200	E	10.0	216	E 4	mg/L		127	80 - 120	1	20

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 400-350111/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 350346**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 350111**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/17/17 16:17	04/18/17 16:49	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/17/17 16:17	04/18/17 16:49	5

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# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 400-350111/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 350346**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 350111**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		04/17/17 16:17	04/18/17 16:49	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/17/17 16:17	04/18/17 16:49	5
Boron	<0.021		0.050	0.021	mg/L		04/17/17 16:17	04/18/17 16:49	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/17/17 16:17	04/18/17 16:49	5
Calcium	<0.13		0.25	0.13	mg/L		04/17/17 16:17	04/18/17 16:49	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/17/17 16:17	04/18/17 16:49	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/17/17 16:17	04/18/17 16:49	5
Lead	<0.00035		0.0013	0.00035	mg/L		04/17/17 16:17	04/18/17 16:49	5
Lithium	<0.0032		0.0050	0.0032	mg/L		04/17/17 16:17	04/18/17 16:49	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/17/17 16:17	04/18/17 16:49	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/17/17 16:17	04/18/17 16:49	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/17/17 16:17	04/18/17 16:49	5

**Lab Sample ID: LCS 400-350111/2-A**  
**Matrix: Water**  
**Analysis Batch: 350346**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 350111**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0557		mg/L		111	80 - 120
Arsenic	0.0500	0.0549		mg/L		110	80 - 120
Barium	0.0500	0.0522		mg/L		104	80 - 120
Beryllium	0.0500	0.0547		mg/L		109	80 - 120
Boron	0.100	0.0994		mg/L		99	80 - 120
Cadmium	0.0500	0.0530		mg/L		106	80 - 120
Calcium	5.00	5.14		mg/L		103	80 - 120
Chromium	0.0500	0.0539		mg/L		108	80 - 120
Cobalt	0.0500	0.0527		mg/L		105	80 - 120
Lead	0.0500	0.0504		mg/L		101	80 - 120
Lithium	0.0500	0.0541		mg/L		108	80 - 120
Molybdenum	0.100	0.106		mg/L		106	80 - 120
Selenium	0.0500	0.0523		mg/L		105	80 - 120
Thallium	0.0100	0.0105		mg/L		105	80 - 120

**Lab Sample ID: 400-136455-B-20-B MS ^5**  
**Matrix: Water**  
**Analysis Batch: 350346**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 350111**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0600		mg/L		120	75 - 125
Arsenic	0.00046	J	0.0500	0.0581		mg/L		116	75 - 125
Barium	0.048		0.0500	0.0998		mg/L		105	75 - 125
Beryllium	<0.00034		0.0500	0.0575		mg/L		115	75 - 125
Boron	<0.021		0.100	0.121		mg/L		121	75 - 125
Cadmium	<0.00034		0.0500	0.0523		mg/L		105	75 - 125
Calcium	6.7		5.00	12.0		mg/L		106	75 - 125
Chromium	<0.0011		0.0500	0.0542		mg/L		108	75 - 125
Cobalt	0.0023	J	0.0500	0.0557		mg/L		107	75 - 125
Lead	<0.00035		0.0500	0.0508		mg/L		102	75 - 125
Lithium	<0.0032		0.0500	0.0539		mg/L		108	75 - 125

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 400-136455-B-20-B MS ^5**  
**Matrix: Water**  
**Analysis Batch: 350346**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 350111**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Molybdenum	<0.00085		0.100	0.111		mg/L		111	75 - 125
Selenium	0.00034	J	0.0500	0.0585		mg/L		116	75 - 125
Thallium	<0.000085		0.0100	0.0105		mg/L		105	75 - 125

**Lab Sample ID: 400-136455-B-20-C MSD ^5**  
**Matrix: Water**  
**Analysis Batch: 350346**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 350111**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0564		mg/L		113	75 - 125	6	20
Arsenic	0.00046	J	0.0500	0.0561		mg/L		112	75 - 125	3	20
Barium	0.048		0.0500	0.0998		mg/L		104	75 - 125	0	20
Beryllium	<0.00034		0.0500	0.0549		mg/L		110	75 - 125	5	20
Boron	<0.021		0.100	0.108		mg/L		108	75 - 125	12	20
Cadmium	<0.00034		0.0500	0.0517		mg/L		103	75 - 125	1	20
Calcium	6.7		5.00	11.7		mg/L		101	75 - 125	2	20
Chromium	<0.0011		0.0500	0.0537		mg/L		107	75 - 125	1	20
Cobalt	0.0023	J	0.0500	0.0552		mg/L		106	75 - 125	1	20
Lead	<0.00035		0.0500	0.0499		mg/L		100	75 - 125	2	20
Lithium	<0.0032		0.0500	0.0529		mg/L		106	75 - 125	2	20
Molybdenum	<0.00085		0.100	0.104		mg/L		104	75 - 125	6	20
Selenium	0.00034	J	0.0500	0.0543		mg/L		108	75 - 125	7	20
Thallium	<0.000085		0.0100	0.0104		mg/L		104	75 - 125	1	20

**Lab Sample ID: MB 400-350289/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 351778**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 350289**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		04/18/17 15:16	04/28/17 13:14	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		04/18/17 15:16	04/28/17 13:14	5
Barium	<0.00049		0.0025	0.00049	mg/L		04/18/17 15:16	04/28/17 13:14	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		04/18/17 15:16	04/28/17 13:14	5
Boron	<0.021		0.050	0.021	mg/L		04/18/17 15:16	04/28/17 13:14	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		04/18/17 15:16	04/28/17 13:14	5
Calcium	<0.13		0.25	0.13	mg/L		04/18/17 15:16	04/28/17 13:14	5
Chromium	<0.0011		0.0025	0.0011	mg/L		04/18/17 15:16	04/28/17 13:14	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		04/18/17 15:16	04/28/17 13:14	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		04/18/17 15:16	04/28/17 13:14	5
Lithium	<0.0032		0.0050	0.0032	mg/L		04/18/17 15:16	04/28/17 13:14	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		04/18/17 15:16	04/28/17 13:14	5
Selenium	<0.00024		0.0013	0.00024	mg/L		04/18/17 15:16	04/28/17 13:14	5
Thallium	<0.000085		0.00050	0.000085	mg/L		04/18/17 15:16	04/28/17 13:14	5

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 400-350289/2-A**  
**Matrix: Water**  
**Analysis Batch: 351778**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 350289**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0511		mg/L		102	80 - 120
Arsenic	0.0500	0.0491		mg/L		98	80 - 120
Barium	0.0500	0.0482		mg/L		96	80 - 120
Beryllium	0.0500	0.0494		mg/L		99	80 - 120
Boron	0.100	0.100		mg/L		100	80 - 120
Cadmium	0.0500	0.0485		mg/L		97	80 - 120
Calcium	5.00	4.60		mg/L		92	80 - 120
Chromium	0.0500	0.0482		mg/L		96	80 - 120
Cobalt	0.0500	0.0501		mg/L		100	80 - 120
Lead	0.0500	0.0488	^	mg/L		98	80 - 120
Lithium	0.0500	0.0508		mg/L		102	80 - 120
Molybdenum	0.100	0.0975		mg/L		97	80 - 120
Selenium	0.0500	0.0478		mg/L		96	80 - 120
Thallium	0.0100	0.00952		mg/L		95	80 - 120

**Lab Sample ID: 400-136546-5 MS**  
**Matrix: Water**  
**Analysis Batch: 351778**

**Client Sample ID: FERB-1**  
**Prep Type: Total Recoverable**  
**Prep Batch: 350289**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0528		mg/L		106	75 - 125
Arsenic	<0.00046		0.0500	0.0501		mg/L		100	75 - 125
Barium	<0.00049		0.0500	0.0486		mg/L		97	75 - 125
Beryllium	<0.00034		0.0500	0.0493		mg/L		99	75 - 125
Boron	<0.021		0.100	0.0966		mg/L		97	75 - 125
Cadmium	<0.00034		0.0500	0.0481		mg/L		96	75 - 125
Calcium	<0.13		5.00	4.80		mg/L		96	75 - 125
Chromium	<0.0011		0.0500	0.0495		mg/L		99	75 - 125
Cobalt	<0.00040		0.0500	0.0508		mg/L		102	75 - 125
Lead	<0.00035	^	0.0500	0.0472	^	mg/L		94	75 - 125
Lithium	<0.0032		0.0500	0.0433		mg/L		87	75 - 125
Molybdenum	0.0035	J	0.100	0.101		mg/L		98	75 - 125
Selenium	0.0018		0.0500	0.0505		mg/L		97	75 - 125
Thallium	<0.000085		0.0100	0.00938		mg/L		94	75 - 125

**Lab Sample ID: 400-136546-5 MSD**  
**Matrix: Water**  
**Analysis Batch: 351778**

**Client Sample ID: FERB-1**  
**Prep Type: Total Recoverable**  
**Prep Batch: 350289**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0528		mg/L		106	75 - 125	0	20
Arsenic	<0.00046		0.0500	0.0500		mg/L		100	75 - 125	0	20
Barium	<0.00049		0.0500	0.0509		mg/L		102	75 - 125	5	20
Beryllium	<0.00034		0.0500	0.0493		mg/L		99	75 - 125	0	20
Boron	<0.021		0.100	0.0969		mg/L		97	75 - 125	0	20
Cadmium	<0.00034		0.0500	0.0487		mg/L		97	75 - 125	1	20
Calcium	<0.13		5.00	4.81		mg/L		96	75 - 125	0	20
Chromium	<0.0011		0.0500	0.0500		mg/L		100	75 - 125	1	20

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 400-136546-5 MSD**  
**Matrix: Water**  
**Analysis Batch: 351778**

**Client Sample ID: FERB-1**  
**Prep Type: Total Recoverable**  
**Prep Batch: 350289**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Cobalt	<0.00040		0.0500	0.0504		mg/L		101	75 - 125	1	20
Lead	<0.00035	^	0.0500	0.0483	^	mg/L		97	75 - 125	2	20
Lithium	<0.0032		0.0500	0.0429		mg/L		86	75 - 125	1	20
Molybdenum	0.0035	J	0.100	0.101		mg/L		98	75 - 125	0	20
Selenium	0.0018		0.0500	0.0495		mg/L		95	75 - 125	2	20
Thallium	<0.000085		0.0100	0.00957		mg/L		96	75 - 125	2	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 400-351012/14-A**  
**Matrix: Water**  
**Analysis Batch: 351281**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 351012**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000070		0.00020	0.000070	mg/L		04/24/17 11:57	04/25/17 13:13	1

**Lab Sample ID: LCS 400-351012/15-A**  
**Matrix: Water**  
**Analysis Batch: 351281**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 351012**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Mercury	0.00101	0.000935		mg/L		93	80 - 120

**Lab Sample ID: 400-136519-E-1-C MS**  
**Matrix: Water**  
**Analysis Batch: 351281**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 351012**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
Mercury	<0.000070		0.00201	0.00188		mg/L		93	80 - 120

**Lab Sample ID: 400-136519-E-1-D MSD**  
**Matrix: Water**  
**Analysis Batch: 351281**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 351012**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Mercury	<0.000070		0.00201	0.00190		mg/L		94	80 - 120	1	20

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 400-349918/1**  
**Matrix: Water**  
**Analysis Batch: 349918**

**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			04/15/17 16:01	1

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-1  
 SDG: Ash Pond

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: LCS 400-349918/2**  
**Matrix: Water**  
**Analysis Batch: 349918**

**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: 400-136554-A-1 DU**  
**Matrix: Water**  
**Analysis Batch: 349918**

**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	130		126		mg/L		0	5

**Lab Sample ID: MB 400-349919/1**  
**Matrix: Water**  
**Analysis Batch: 349919**

**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			04/15/17 17:15	1

**Lab Sample ID: LCS 400-349919/2**  
**Matrix: Water**  
**Analysis Batch: 349919**

**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	246		mg/L		84	78 - 122

**Lab Sample ID: 400-136546-1 DU**  
**Matrix: Water**  
**Analysis Batch: 349919**

**Client Sample ID: WGWC-14A**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	76		76.0		mg/L		3	5

**TestAmerica Pensacola**  
 3355 McLemore Drive  
 Pensacola, FL 32514  
 Phone (850) 474-1001 Fax (850) 478-2671

## Chain of Custody Record

**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTING

Lab P.M.: Whitmire, Chiyenne R  
 Sampler: T. Payne P. M. Burch JR  
 E-Mail: chiyenne.whitmire@testamericainc.com  
 Phone:

Carrier Tracking No(s):  
 Job #: 400-136546  
 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 Dodecalhydrate  
 U - Acetone  
 V - MCAA  
 W - ph 4-5  
 Z - other (specify)

Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

Sample Identification	Sample Date	Sample Time	Sample Type (C-comp, G-grab)	Matrix (W-water, S-solid, O-owastwater)	Field Filtered Sample (Yes or No)	Performance (MSD, Yes or No)		Metals - (Part 267 Appendix III & IV) EPA 6020 & EPA 7470		Radium 226 & 228 - SW-846 9315 & 9320		Total Number of Containers	Special Instructions/Note:
						TDS - SM 2540C; Cl, F, SO4 - EPA 300	Performance (MSD, Yes or No)	I	D	D	D		
WGWC-14A	4/11/17	1405	G	W	X	X	X	X	X	X	3		
WGWC-19	4/11/17	1407	G	W	X	X	X	X	X	X	3		
WGWC-9	4/11/17	1528	G	W	X	X	X	X	X	X	3		
FB-1	4/11/17	1345	G	W	X	X	X	X	X	X	3		
FEBB-1	4/11/17	1450	G	W	X	X	X	X	X	X	3		
DUP-1	4/11/17	--	G	W	X	X	X	X	X	X	3		

Possible Hazard Identification  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months  
 Special Instructions/QC Requirements:

Relinquished by: [Signature]	Date/Time: 4/11/17 1047	Company: [Signature]
Relinquished by: [Signature]	Date/Time: 4/12/17 1600	Company: [Signature]
Relinquished by: [Signature]	Date/Time: 4/12/17 0901	Company: [Signature]

Empty Kit Relinquished by: [Signature] Date: 4/12/17 1002 Company: [Signature]  
 Relinquished by: [Signature] Date/Time: 4/12/17 1002 Company: [Signature]  
 Relinquished by: [Signature] Date/Time: 4/12/17 0901 Company: [Signature]

Custody Seal No.: [Signature] Cooler Temperature(s) °C and Other Remarks: [Signature]

## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-136546-1

SDG Number: Ash Pond

**Login Number: 136546**

**List Number: 1**

**Creator: Siddoway, Benjamin**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8°C IR-2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





# Accreditation/Certification Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-1  
SDG: Ash Pond

## 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: 400-136546-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR Plant Wansley

For:

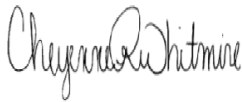
Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

5/17/2017 10:11:57 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

Review your project  
results through

Total Access

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

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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 Wansley

TestAmerica Job ID: 400-136546-2  
SDG: Ash Pond

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**Job ID: 400-136546-2**

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**Laboratory: TestAmerica Pensacola**

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**Narrative**

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**Job Narrative  
400-136546-2**

**RAD**

Method(s) PrecSep\_0: Radium 228 Prep Batch 160-304121. The following samples were reduced due to limited volume: WGWC-14A (400-136546-1), WGWC-19 (400-136546-2), WGWC-9 (400-136546-3), FB-1 (400-136546-4), FERB-1 (400-136546-5) and DUP-1 (400-136546-6).

Method(s) PrecSep-21: Radium 226 Prep Batch 160-304149. The following samples were reduced due to limited volume: WGWC-14A (400-136546-1), WGWC-19 (400-136546-2), WGWC-9 (400-136546-3), FB-1 (400-136546-4), FERB-1 (400-136546-5) and DUP-1 (400-136546-6).



# Method Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-2  
SDG: Ash Pond

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 Wansley

TestAmerica Job ID: 400-136546-2  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-136546-1	WGWC-14A	Water	04/11/17 14:05	04/13/17 09:01
400-136546-2	WGWC-19	Water	04/11/17 14:07	04/13/17 09:01
400-136546-3	WGWC-9	Water	04/11/17 15:28	04/13/17 09:01
400-136546-4	FB-1	Water	04/11/17 13:45	04/13/17 09:01
400-136546-5	FERB-1	Water	04/11/17 14:50	04/13/17 09:01
400-136546-6	DUP-1	Water	04/11/17 00:00	04/13/17 09:01

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# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-2  
SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Lab Sample ID: 400-136546-1**

**Date Collected: 04/11/17 14:05**

**Matrix: Water**

**Date Received: 04/13/17 09:01**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.520		0.176	0.183	1.00	0.173	pCi/L	04/18/17 14:48	05/11/17 05:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					04/18/17 14:48	05/11/17 05:51	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.380	U	0.306	0.308	1.00	0.483	pCi/L	04/19/17 11:39	05/05/17 09:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					04/19/17 11:39	05/05/17 09:47	1
Y Carrier	83.7		40 - 110					04/19/17 11:39	05/05/17 09:47	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	0.901		0.353	0.358	5.00	0.483	pCi/L		05/12/17 15:24	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-2  
SDG: Ash Pond

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-136546-2**

**Date Collected: 04/11/17 14:07**

**Matrix: Water**

**Date Received: 04/13/17 09:01**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0639	U	0.0894	0.0896	1.00	0.151	pCi/L	04/18/17 14:48	05/11/17 05:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					04/18/17 14:48	05/11/17 05:51	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.126	U	0.286	0.286	1.00	0.492	pCi/L	04/19/17 11:39	05/05/17 09:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					04/19/17 11:39	05/05/17 09:48	1
Y Carrier	80.4		40 - 110					04/19/17 11:39	05/05/17 09:48	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.190	U	0.299	0.299	5.00	0.492	pCi/L		05/12/17 15:24	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-2  
SDG: Ash Pond

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-136546-3**

**Date Collected: 04/11/17 15:28**

**Matrix: Water**

**Date Received: 04/13/17 09:01**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0793	U	0.0948	0.0950	1.00	0.155	pCi/L	04/18/17 14:48	05/11/17 05:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					04/18/17 14:48	05/11/17 05:51	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.408	U	0.324	0.326	1.00	0.512	pCi/L	04/19/17 11:39	05/05/17 09:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					04/19/17 11:39	05/05/17 09:47	1
Y Carrier	82.2		40 - 110					04/19/17 11:39	05/05/17 09:47	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	0.488	U	0.338	0.340	5.00	0.512	pCi/L		05/12/17 15:24	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-2  
SDG: Ash Pond

**Client Sample ID: FB-1**  
**Date Collected: 04/11/17 13:45**  
**Date Received: 04/13/17 09:01**

**Lab Sample ID: 400-136546-4**  
**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	0.00459	U	0.0760	0.0760	1.00	0.157	pCi/L	04/18/17 14:48	05/11/17 05:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.4		40 - 110					04/18/17 14:48	05/11/17 05:51	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.327	U	0.297	0.299	1.00	0.475	pCi/L	04/19/17 11:39	05/05/17 09:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.4		40 - 110					04/19/17 11:39	05/05/17 09:47	1
Y Carrier	81.5		40 - 110					04/19/17 11:39	05/05/17 09:47	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	0.332	U	0.307	0.308	5.00	0.475	pCi/L		05/12/17 15:24	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-2  
SDG: Ash Pond

**Client Sample ID: FERB-1**

**Date Collected: 04/11/17 14:50**

**Date Received: 04/13/17 09:01**

**Lab Sample ID: 400-136546-5**

**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	-0.0168	U	0.0665	0.0665	1.00	0.149	pCi/L	04/18/17 14:48	05/11/17 09:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					04/18/17 14:48	05/11/17 09:26	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.255	U	0.287	0.288	1.00	0.471	pCi/L	04/19/17 11:39	05/05/17 09:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					04/19/17 11:39	05/05/17 09:47	1
Y Carrier	80.7		40 - 110					04/19/17 11:39	05/05/17 09:47	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	0.239	U	0.294	0.295	5.00	0.471	pCi/L		05/12/17 15:24	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-2  
SDG: Ash Pond

**Client Sample ID: DUP-1**

**Date Collected: 04/11/17 00:00**

**Date Received: 04/13/17 09:01**

**Lab Sample ID: 400-136546-6**

**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	0.0272	U	0.0705	0.0706	1.00	0.135	pCi/L	04/18/17 14:48	05/11/17 05:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					04/18/17 14:48	05/11/17 05:51	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.184	U	0.285	0.286	1.00	0.480	pCi/L	04/19/17 11:39	05/05/17 09:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					04/19/17 11:39	05/05/17 09:47	1
Y Carrier	83.0		40 - 110					04/19/17 11:39	05/05/17 09:47	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	0.211	U	0.294	0.294	5.00	0.480	pCi/L		05/12/17 15:24	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-2  
SDG: Ash Pond

## 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 Wansley

TestAmerica Job ID: 400-136546-2  
SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Date Collected: 04/11/17 14:05**

**Date Received: 04/13/17 09:01**

**Lab Sample ID: 400-136546-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			304149	04/18/17 14:48	LDE	TAL SL
Total/NA	Analysis	9315		1	308225	05/11/17 05:51	ALD	TAL SL
Total/NA	Prep	PrecSep_0			304232	04/19/17 11:39	LDE	TAL SL
Total/NA	Analysis	9320		1	307426	05/05/17 09:47	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	308452	05/12/17 15:24	RTM	TAL SL

**Client Sample ID: WGWC-19**

**Date Collected: 04/11/17 14:07**

**Date Received: 04/13/17 09:01**

**Lab Sample ID: 400-136546-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			304149	04/18/17 14:48	LDE	TAL SL
Total/NA	Analysis	9315		1	308225	05/11/17 05:51	ALD	TAL SL
Total/NA	Prep	PrecSep_0			304232	04/19/17 11:39	LDE	TAL SL
Total/NA	Analysis	9320		1	307426	05/05/17 09:48	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	308452	05/12/17 15:24	RTM	TAL SL

**Client Sample ID: WGWC-9**

**Date Collected: 04/11/17 15:28**

**Date Received: 04/13/17 09:01**

**Lab Sample ID: 400-136546-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			304149	04/18/17 14:48	LDE	TAL SL
Total/NA	Analysis	9315		1	308225	05/11/17 05:51	ALD	TAL SL
Total/NA	Prep	PrecSep_0			304232	04/19/17 11:39	LDE	TAL SL
Total/NA	Analysis	9320		1	307426	05/05/17 09:47	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	308452	05/12/17 15:24	RTM	TAL SL

**Client Sample ID: FB-1**

**Date Collected: 04/11/17 13:45**

**Date Received: 04/13/17 09:01**

**Lab Sample ID: 400-136546-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			304149	04/18/17 14:48	LDE	TAL SL
Total/NA	Analysis	9315		1	308225	05/11/17 05:51	ALD	TAL SL
Total/NA	Prep	PrecSep_0			304232	04/19/17 11:39	LDE	TAL SL
Total/NA	Analysis	9320		1	307426	05/05/17 09:47	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	308452	05/12/17 15:24	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-2  
SDG: Ash Pond

**Client Sample ID: FERB-1**

**Date Collected: 04/11/17 14:50**

**Date Received: 04/13/17 09:01**

**Lab Sample ID: 400-136546-5**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			304149	04/18/17 14:48	LDE	TAL SL
Total/NA	Analysis	9315		1	308226	05/11/17 09:26	ALD	TAL SL
Total/NA	Prep	PrecSep_0			304232	04/19/17 11:39	LDE	TAL SL
Total/NA	Analysis	9320		1	307426	05/05/17 09:47	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	308452	05/12/17 15:24	RTM	TAL SL

**Client Sample ID: DUP-1**

**Date Collected: 04/11/17 00:00**

**Date Received: 04/13/17 09:01**

**Lab Sample ID: 400-136546-6**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			304149	04/18/17 14:48	LDE	TAL SL
Total/NA	Analysis	9315		1	308225	05/11/17 05:51	ALD	TAL SL
Total/NA	Prep	PrecSep_0			304232	04/19/17 11:39	LDE	TAL SL
Total/NA	Analysis	9320		1	307426	05/05/17 09:47	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	308452	05/12/17 15:24	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 Wansley

TestAmerica Job ID: 400-136546-2  
SDG: Ash Pond

## Rad

### Prep Batch: 304149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136546-1	WGWC-14A	Total/NA	Water	PrecSep-21	
400-136546-2	WGWC-19	Total/NA	Water	PrecSep-21	
400-136546-3	WGWC-9	Total/NA	Water	PrecSep-21	
400-136546-4	FB-1	Total/NA	Water	PrecSep-21	
400-136546-5	FERB-1	Total/NA	Water	PrecSep-21	
400-136546-6	DUP-1	Total/NA	Water	PrecSep-21	
MB 160-304149/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-304149/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-135992-B-12-A DU	Duplicate	Total/NA	Water	PrecSep-21	

### Prep Batch: 304232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136546-1	WGWC-14A	Total/NA	Water	PrecSep_0	
400-136546-2	WGWC-19	Total/NA	Water	PrecSep_0	
400-136546-3	WGWC-9	Total/NA	Water	PrecSep_0	
400-136546-4	FB-1	Total/NA	Water	PrecSep_0	
400-136546-5	FERB-1	Total/NA	Water	PrecSep_0	
400-136546-6	DUP-1	Total/NA	Water	PrecSep_0	
MB 160-304232/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-304232/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-135992-B-12-B DU	Duplicate	Total/NA	Water	PrecSep_0	



# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-2  
SDG: Ash Pond

## Method: 9315 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-304149/1-A**  
**Matrix: Water**  
**Analysis Batch: 308225**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 304149**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.01044	U	0.0840	0.0840	1.00	0.168	pCi/L	04/18/17 14:48	05/11/17 05:49	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.6		40 - 110					04/18/17 14:48	05/11/17 05:49	1

**Lab Sample ID: LCS 160-304149/2-A**  
**Matrix: Water**  
**Analysis Batch: 308225**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 304149**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	15.1	13.69		1.46	1.00	0.141	pCi/L	90	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	97.9		40 - 110						

**Lab Sample ID: 400-135992-B-12-A DU**  
**Matrix: Water**  
**Analysis Batch: 308225**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 304149**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.0869	U	0.1693	U	0.127	1.00	0.180	pCi/L	0.35	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	87.6		40 - 110							

## Method: 9320 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-304232/1-A**  
**Matrix: Water**  
**Analysis Batch: 307426**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 304232**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.1551	U	0.305	0.306	1.00	0.570	pCi/L	04/19/17 11:39	05/05/17 09:45	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.6		40 - 110					04/19/17 11:39	05/05/17 09:45	1
Y Carrier	82.6		40 - 110					04/19/17 11:39	05/05/17 09:45	1

# QC Sample Results

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-2  
SDG: Ash Pond

## Method: 9320 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-304232/2-A**  
**Matrix: Water**  
**Analysis Batch: 307426**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 304232**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	18.0	17.18		1.86	1.00	0.473	pCi/L	96	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	97.9		40 - 110
Y Carrier	85.6		40 - 110

**Lab Sample ID: 400-135992-B-12-B DU**  
**Matrix: Water**  
**Analysis Batch: 307426**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 304232**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.0104	U	0.1509	U	0.372	1.00	0.636	pCi/L	0.22	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	87.6		40 - 110
Y Carrier	82.6		40 - 110

## Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

**Lab Sample ID: 400-136568-A-3 DU**  
**Matrix: Water**  
**Analysis Batch: 308452**

**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	0.334	U	0.3612	U	0.332	5.00	0.531	pCi/L	0.04	

**TestAmerica Pensacola**  
 3355 McLemore Drive  
 Pensacola, FL 32514  
 Phone (850) 474-1001 Fax (850) 478-2671

**Chain of Custody Record**

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING

Sampler: T. Payne P. M. Burch JR  
 Lab PM: Whitmore, Chiyenne R  
 Carrier Tracking No(s):  
 Client Contact: Joju Abraham  
 E-Mail: chiyenne.whitmore@testamericainc.com  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

Due Date Requested:  
 TAT Requested (days):  
 PO #:  
 WO #:  
 Project #:  
 SSOW #:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=soil, A=air)	Field Filtered Sample (Yes or No)	Perform MS/SD (Yes or No)	TDS - SM 2540C; Cl <sub>2</sub> F <sub>2</sub> SO <sub>4</sub> - EPA 300	Metals - (Part 267 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320	Total Number of Containers	Special Instructions/Note:
WGWC-14A	4/11/17	1405	G	W	X	X	X	X	3		
WGWC-19	4/11/17	1407	G	W	X	X	X	X	3		
WGWC-9	4/11/17	1528	G	W	X	X	X	X	3		
FB-1	4/11/17	1345	G	W	X	X	X	X	3		
FEBB-1	4/11/17	1450	G	W	X	X	X	X	3		
DUP-1	4/11/17	--	G	W	X	X	X	X	3		

QR Code: 400-136546 COC

Preservation Codes:  
 A - HCL  
 B - NaOH  
 C - Zn Acetate  
 D - Nitric Acid  
 E - NaHSO<sub>4</sub>  
 F - MeOH  
 G - Amchlor  
 H - Ascorbic Acid  
 I - Ice  
 J - DI Water  
 K - EDTA  
 L - EDA  
 Other:  
 M - Hexane  
 N - None  
 O - AsNaO<sub>2</sub>  
 P - Na<sub>2</sub>O<sub>4</sub>S  
 Q - Na<sub>2</sub>SO<sub>3</sub>  
 R - Na<sub>2</sub>SO<sub>3</sub>  
 S - H<sub>2</sub>SO<sub>4</sub>  
 T - TSP Dodecalhydrate  
 U - Acetone  
 V - MCAA  
 W - ph 4-5  
 Z - other (specify)

Possible Hazard Identification  
 Non-Hazard  
 Flammable  
 Skin Irritant  
 Poison B  
 Unknown  
 Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  
 Disposal By Lab  
 Archive For \_\_\_\_\_ Months

Special Instructions/QC Requirements:

Relinquished by:	Date:	Company:	Received by:	Date/Time:	Company:
J.A.	5/11/17 10:47	SCM	[Signature]	5/12/17 10:02	Company
[Signature]	5/12/17 16:00	Company	[Signature]	5/13/17 09:01	Company
[Signature]		Company	[Signature]		Company

Cooler Temperature(s) °C and Other Remarks: J.S.C. J.S.C.

## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-136546-2

SDG Number: Ash Pond

**Login Number: 136546**

**List Number: 1**

**Creator: Siddoway, Benjamin**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8°C IR-2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Accreditation/Certification Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-2  
SDG: Ash Pond

## 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	06-30-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17 *
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	03-31-19
Florida	NELAP	4	E87689	06-30-17 *
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17 *
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17 *
Nevada	State Program	9	MO000542017-1	07-31-17
New Jersey	NELAP	2	MO002	06-30-17 *
New York	NELAP	2	11616	03-31-18

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Pensacola

# Accreditation/Certification Summary

Client: Southern Company  
Project/Site: CCR Plant Wansley

TestAmerica Job ID: 400-136546-2  
SDG: Ash Pond

## 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	06-14-17 *
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: 400-137038-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR - Plant Wansley

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

5/17/2017 11:07:45 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

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[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

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**Job ID: 400-137038-1**

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**Laboratory: TestAmerica Pensacola**

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**Narrative**

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**Job Narrative  
400-137038-1**

**HPLC/IC**

Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: WGWC-16 (400-137038-7). Elevated reporting limits (RLs) are provided.

**Metals**

Method(s) 6020: The following sample was diluted to bring the concentration of target analytes within the calibration range: WGWC-16 (400-137038-7). Elevated reporting limits (RLs) are provided.

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# Detection Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

## Client Sample ID: WGWA-18

## Lab Sample ID: 400-137038-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.9		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	10		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00062	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.017		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	23		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0020	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0036	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0018		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	70		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-4

## Lab Sample ID: 400-137038-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.2		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.12	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	6.6		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.0056		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	17		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0037	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	86		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-3

## Lab Sample ID: 400-137038-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.6		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.70	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.015		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Molybdenum	0.00098	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00035	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

## Client Sample ID: WGWA-5

## Lab Sample ID: 400-137038-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.8		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.89	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.018		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.5		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 Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

### Client Sample ID: WGWA-5 (Continued)

### Lab Sample ID: 400-137038-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.0026		0.0025	0.00040	mg/L	5		6020	Total
Total Dissolved Solids	22		5.0	3.4	mg/L	1		SM 2540C	Total/NA

### Client Sample ID: WGWA-6

### Lab Sample ID: 400-137038-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.3		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	8.2		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.0062		0.0025	0.00049	mg/L	5		6020	Total
Calcium	28		0.25	0.13	mg/L	5		6020	Total
Total Dissolved Solids	100		5.0	3.4	mg/L	1		SM 2540C	Total/NA

### Client Sample ID: WGWA-7

### Lab Sample ID: 400-137038-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.8		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.012		0.0025	0.00049	mg/L	5		6020	Total
Calcium	1.9		0.25	0.13	mg/L	5		6020	Total
Total Dissolved Solids	10		5.0	3.4	mg/L	1		SM 2540C	Total/NA

### Client Sample ID: WGWC-16

### Lab Sample ID: 400-137038-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	330		20	18	mg/L	20		300.0	Total/NA
Fluoride	0.13	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	620		20	14	mg/L	20		300.0	Total/NA
Arsenic	0.0014		0.0013	0.00046	mg/L	5		6020	Total
Barium	0.057		0.0025	0.00049	mg/L	5		6020	Total
Cadmium	0.00058	J	0.0025	0.00034	mg/L	5		6020	Total
Cobalt	0.014		0.0025	0.00040	mg/L	5		6020	Total
Lithium	0.0081		0.0050	0.0032	mg/L	5		6020	Total
Selenium	0.013		0.0013	0.00024	mg/L	5		6020	Total
Thallium	0.00024	J	0.00050	0.000085	mg/L	5		6020	Total
Boron - DL	6.2		0.50	0.21	mg/L	50		6020	Total
Calcium - DL	300		2.5	1.3	mg/L	50		6020	Total
Mercury	0.00019	J	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	1700		5.0	3.4	mg/L	1		SM 2540C	Total/NA

### Client Sample ID: WGWC-15

### Lab Sample ID: 400-137038-8

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

## Client Sample ID: WGWC-15 (Continued)

## Lab Sample ID: 400-137038-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.0		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.95		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	39		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0019		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.018		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	32		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0059		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0040	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	180		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-17

## Lab Sample ID: 400-137038-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.8		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.13	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	20		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00095	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.023		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	12		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0023	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0049	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0074	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

## Client Sample ID: FERB-1

## Lab Sample ID: 400-137038-10

No Detections.

## Client Sample ID: FB-1

## Lab Sample ID: 400-137038-11

No Detections.

## Client Sample ID: DUP-1

## Lab Sample ID: 400-137038-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.10	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	8.5		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.0064		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	28		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 Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

**Client Sample ID: DUP-1 (Continued)**

**Lab Sample ID: 400-137038-12**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.0039	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	100		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

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# Method Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN

#### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-137038-1	WGWA-18	Water	04/25/17 10:10	04/27/17 09:15
400-137038-2	WGWA-4	Water	04/25/17 10:30	04/27/17 09:15
400-137038-3	WGWA-3	Water	04/25/17 11:35	04/27/17 09:15
400-137038-4	WGWA-5	Water	04/25/17 12:20	04/27/17 09:15
400-137038-5	WGWA-6	Water	04/25/17 14:00	04/27/17 09:15
400-137038-6	WGWA-7	Water	04/25/17 14:00	04/27/17 09:15
400-137038-7	WGWC-16	Water	04/25/17 14:20	04/27/17 09:15
400-137038-8	WGWC-15	Water	04/25/17 15:33	04/27/17 09:15
400-137038-9	WGWC-17	Water	04/25/17 16:10	04/27/17 09:15
400-137038-10	FERB-1	Water	04/25/17 10:30	04/27/17 09:15
400-137038-11	FB-1	Water	04/25/17 11:35	04/27/17 09:15
400-137038-12	DUP-1	Water	04/25/17 00:00	04/27/17 09:15



# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

**Client Sample ID: WGWA-18**

**Date Collected: 04/25/17 10:10**

**Date Received: 04/27/17 09:15**

**Lab Sample ID: 400-137038-1**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>1.9</b>		1.0	0.89	mg/L			05/02/17 01:13	1
Fluoride	<0.082		0.20	0.082	mg/L			05/02/17 01:13	1
<b>Sulfate</b>	<b>10</b>		1.0	0.70	mg/L			05/02/17 01:13	1

### 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		05/11/17 14:23	05/11/17 22:36	5
<b>Arsenic</b>	<b>0.00062</b>	<b>J</b>	0.0013	0.00046	mg/L		05/11/17 14:23	05/11/17 22:36	5
<b>Barium</b>	<b>0.017</b>		0.0025	0.00049	mg/L		05/11/17 14:23	05/11/17 22:36	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/11/17 22:36	5
Boron	<0.021		0.050	0.021	mg/L		05/11/17 14:23	05/11/17 22:36	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/11/17 22:36	5
<b>Calcium</b>	<b>23</b>		0.25	0.13	mg/L		05/11/17 14:23	05/11/17 22:36	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/11/17 14:23	05/11/17 22:36	5
<b>Cobalt</b>	<b>0.0020</b>	<b>J</b>	0.0025	0.00040	mg/L		05/11/17 14:23	05/11/17 22:36	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/11/17 14:23	05/11/17 22:36	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/11/17 14:23	05/11/17 22:36	5
<b>Molybdenum</b>	<b>0.0036</b>	<b>J</b>	0.015	0.00085	mg/L		05/11/17 14:23	05/11/17 22:36	5
<b>Selenium</b>	<b>0.0018</b>		0.0013	0.00024	mg/L		05/11/17 14:23	05/11/17 22:36	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/11/17 14:23	05/11/17 22:36	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		05/09/17 11:08	05/10/17 12:31	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>70</b>		5.0	3.4	mg/L			04/29/17 15:11	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-137038-2**

**Date Collected: 04/25/17 10:30**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.2		1.0	0.89	mg/L			05/02/17 01:58	1
Fluoride	0.12	J	0.20	0.082	mg/L			05/02/17 01:58	1
Sulfate	6.6		1.0	0.70	mg/L			05/02/17 01:58	1

### 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		05/11/17 14:23	05/11/17 22:59	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/11/17 14:23	05/11/17 22:59	5
Barium	0.0056		0.0025	0.00049	mg/L		05/11/17 14:23	05/11/17 22:59	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/11/17 22:59	5
Boron	<0.021		0.050	0.021	mg/L		05/11/17 14:23	05/11/17 22:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/11/17 22:59	5
Calcium	17		0.25	0.13	mg/L		05/11/17 14:23	05/11/17 22:59	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/11/17 14:23	05/11/17 22:59	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/11/17 14:23	05/11/17 22:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/11/17 14:23	05/11/17 22:59	5
Lithium	0.0037	J	0.0050	0.0032	mg/L		05/11/17 14:23	05/11/17 22:59	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/11/17 14:23	05/11/17 22:59	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/11/17 14:23	05/11/17 22:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/11/17 14:23	05/11/17 22:59	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		05/09/17 11:08	05/10/17 12:49	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	86		5.0	3.4	mg/L			04/29/17 15:11	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

**Client Sample ID: WGWA-3**

**Lab Sample ID: 400-137038-3**

**Date Collected: 04/25/17 11:35**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>1.6</b>		1.0	0.89	mg/L			05/02/17 02:21	1
Fluoride	<0.082		0.20	0.082	mg/L			05/02/17 02:21	1
<b>Sulfate</b>	<b>0.70</b>	<b>J</b>	1.0	0.70	mg/L			05/02/17 02:21	1

### 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		05/11/17 14:23	05/11/17 23:21	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/11/17 14:23	05/11/17 23:21	5
<b>Barium</b>	<b>0.015</b>		0.0025	0.00049	mg/L		05/11/17 14:23	05/11/17 23:21	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/11/17 23:21	5
Boron	<0.021		0.050	0.021	mg/L		05/11/17 14:23	05/11/17 23:21	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/11/17 23:21	5
<b>Calcium</b>	<b>2.0</b>		0.25	0.13	mg/L		05/11/17 14:23	05/11/17 23:21	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/11/17 14:23	05/11/17 23:21	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/11/17 14:23	05/11/17 23:21	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/11/17 14:23	05/11/17 23:21	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/11/17 14:23	05/11/17 23:21	5
<b>Molybdenum</b>	<b>0.00098</b>	<b>J</b>	0.015	0.00085	mg/L		05/11/17 14:23	05/11/17 23:21	5
<b>Selenium</b>	<b>0.00035</b>	<b>J</b>	0.0013	0.00024	mg/L		05/11/17 14:23	05/11/17 23:21	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/11/17 14:23	05/11/17 23:21	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		05/09/17 11:08	05/10/17 12:51	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>22</b>		5.0	3.4	mg/L			04/29/17 15:11	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

**Client Sample ID: WGWA-5**

**Lab Sample ID: 400-137038-4**

**Date Collected: 04/25/17 12:20**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>1.8</b>		1.0	0.89	mg/L			05/02/17 02:44	1
Fluoride	<0.082		0.20	0.082	mg/L			05/02/17 02:44	1
<b>Sulfate</b>	<b>0.89</b>	<b>J</b>	1.0	0.70	mg/L			05/02/17 02:44	1

### 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		05/11/17 14:23	05/11/17 23:26	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/11/17 14:23	05/11/17 23:26	5
<b>Barium</b>	<b>0.018</b>		0.0025	0.00049	mg/L		05/11/17 14:23	05/11/17 23:26	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/11/17 23:26	5
Boron	<0.021		0.050	0.021	mg/L		05/11/17 14:23	05/11/17 23:26	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/11/17 23:26	5
<b>Calcium</b>	<b>1.5</b>		0.25	0.13	mg/L		05/11/17 14:23	05/11/17 23:26	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/11/17 14:23	05/11/17 23:26	5
<b>Cobalt</b>	<b>0.0026</b>		0.0025	0.00040	mg/L		05/11/17 14:23	05/11/17 23:26	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/11/17 14:23	05/11/17 23:26	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/11/17 14:23	05/11/17 23:26	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/11/17 14:23	05/11/17 23:26	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/11/17 14:23	05/11/17 23:26	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/11/17 14:23	05/11/17 23:26	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		05/09/17 11:08	05/10/17 12:53	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>22</b>		5.0	3.4	mg/L			04/29/17 15:11	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-137038-5**

**Date Collected: 04/25/17 14:00**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>1.3</b>		1.0	0.89	mg/L			05/02/17 03:07	1
Fluoride	<0.082		0.20	0.082	mg/L			05/02/17 03:07	1
<b>Sulfate</b>	<b>8.2</b>		1.0	0.70	mg/L			05/02/17 03:07	1

### 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		05/11/17 14:23	05/11/17 23:30	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/11/17 14:23	05/11/17 23:30	5
<b>Barium</b>	<b>0.0062</b>		0.0025	0.00049	mg/L		05/11/17 14:23	05/11/17 23:30	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/11/17 23:30	5
Boron	<0.021		0.050	0.021	mg/L		05/11/17 14:23	05/11/17 23:30	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/11/17 23:30	5
<b>Calcium</b>	<b>28</b>		0.25	0.13	mg/L		05/11/17 14:23	05/11/17 23:30	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/11/17 14:23	05/11/17 23:30	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/11/17 14:23	05/11/17 23:30	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/11/17 14:23	05/11/17 23:30	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/11/17 14:23	05/11/17 23:30	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/11/17 14:23	05/11/17 23:30	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/11/17 14:23	05/11/17 23:30	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/11/17 14:23	05/11/17 23:30	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		05/09/17 11:08	05/10/17 12:54	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>100</b>		5.0	3.4	mg/L			04/29/17 15:11	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

**Client Sample ID: WGWA-7**

**Lab Sample ID: 400-137038-6**

**Date Collected: 04/25/17 14:00**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>1.8</b>		1.0	0.89	mg/L			05/02/17 03:30	1
Fluoride	<0.082		0.20	0.082	mg/L			05/02/17 03:30	1
Sulfate	<0.70		1.0	0.70	mg/L			05/02/17 03:30	1

### 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		05/11/17 14:23	05/11/17 23:35	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/11/17 14:23	05/11/17 23:35	5
<b>Barium</b>	<b>0.012</b>		0.0025	0.00049	mg/L		05/11/17 14:23	05/11/17 23:35	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/11/17 23:35	5
Boron	<0.021		0.050	0.021	mg/L		05/11/17 14:23	05/11/17 23:35	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/11/17 23:35	5
<b>Calcium</b>	<b>1.9</b>		0.25	0.13	mg/L		05/11/17 14:23	05/11/17 23:35	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/11/17 14:23	05/11/17 23:35	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/11/17 14:23	05/11/17 23:35	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/11/17 14:23	05/11/17 23:35	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/11/17 14:23	05/11/17 23:35	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/11/17 14:23	05/11/17 23:35	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/11/17 14:23	05/11/17 23:35	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/11/17 14:23	05/11/17 23:35	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		05/09/17 11:08	05/10/17 12:56	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>10</b>		5.0	3.4	mg/L			04/29/17 15:11	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-137038-7**

Date Collected: 04/25/17 14:20

Matrix: Water

Date Received: 04/27/17 09:15

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	330		20	18	mg/L			05/03/17 15:28	20
Fluoride	0.13	J	0.20	0.082	mg/L			05/02/17 04:38	1
Sulfate	620		20	14	mg/L			05/03/17 15:28	20

### 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		05/11/17 14:23	05/11/17 23:39	5
Arsenic	0.0014		0.0013	0.00046	mg/L		05/11/17 14:23	05/11/17 23:39	5
Barium	0.057		0.0025	0.00049	mg/L		05/11/17 14:23	05/11/17 23:39	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/11/17 23:39	5
Cadmium	0.00058	J	0.0025	0.00034	mg/L		05/11/17 14:23	05/11/17 23:39	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/11/17 14:23	05/11/17 23:39	5
Cobalt	0.014		0.0025	0.00040	mg/L		05/11/17 14:23	05/11/17 23:39	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/11/17 14:23	05/11/17 23:39	5
Lithium	0.0081		0.0050	0.0032	mg/L		05/11/17 14:23	05/11/17 23:39	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/11/17 14:23	05/11/17 23:39	5
Selenium	0.013		0.0013	0.00024	mg/L		05/11/17 14:23	05/11/17 23:39	5
Thallium	0.00024	J	0.00050	0.000085	mg/L		05/11/17 14:23	05/11/17 23:39	5

### Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.2		0.50	0.21	mg/L		05/11/17 14:23	05/12/17 16:25	50
Calcium	300		2.5	1.3	mg/L		05/11/17 14:23	05/12/17 16:25	50

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00019	J	0.00020	0.000070	mg/L		05/09/17 11:08	05/10/17 12:58	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1700		5.0	3.4	mg/L			04/29/17 15:11	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-137038-8**

**Date Collected: 04/25/17 15:33**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.0		1.0	0.89	mg/L			05/02/17 05:01	1
Fluoride	0.95		0.20	0.082	mg/L			05/02/17 05:01	1
Sulfate	39		1.0	0.70	mg/L			05/02/17 05:01	1

### 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		05/11/17 14:23	05/12/17 00:01	5
Arsenic	0.0019		0.0013	0.00046	mg/L		05/11/17 14:23	05/12/17 00:01	5
Barium	0.018		0.0025	0.00049	mg/L		05/11/17 14:23	05/12/17 00:01	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/12/17 00:01	5
Boron	<0.021		0.050	0.021	mg/L		05/11/17 14:23	05/12/17 00:01	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/12/17 00:01	5
Calcium	32		0.25	0.13	mg/L		05/11/17 14:23	05/12/17 00:01	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/11/17 14:23	05/12/17 00:01	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/11/17 14:23	05/12/17 00:01	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/11/17 14:23	05/12/17 00:01	5
Lithium	0.0059		0.0050	0.0032	mg/L		05/11/17 14:23	05/12/17 00:01	5
Molybdenum	0.0040	J	0.015	0.00085	mg/L		05/11/17 14:23	05/12/17 00:01	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/11/17 14:23	05/12/17 00:01	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/11/17 14:23	05/12/17 00:01	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		05/09/17 11:08	05/10/17 13:00	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	180		5.0	3.4	mg/L			04/29/17 15:11	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

**Client Sample ID: WGWC-17**

**Date Collected: 04/25/17 16:10**

**Date Received: 04/27/17 09:15**

**Lab Sample ID: 400-137038-9**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.8		1.0	0.89	mg/L			05/02/17 05:24	1
Fluoride	0.13	J	0.20	0.082	mg/L			05/02/17 05:24	1
Sulfate	20		1.0	0.70	mg/L			05/02/17 05:24	1

### 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		05/11/17 14:23	05/12/17 00:06	5
Arsenic	0.00095	J	0.0013	0.00046	mg/L		05/11/17 14:23	05/12/17 00:06	5
Barium	0.023		0.0025	0.00049	mg/L		05/11/17 14:23	05/12/17 00:06	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/12/17 00:06	5
Boron	<0.021		0.050	0.021	mg/L		05/11/17 14:23	05/12/17 00:06	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/12/17 00:06	5
Calcium	12		0.25	0.13	mg/L		05/11/17 14:23	05/12/17 00:06	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/11/17 14:23	05/12/17 00:06	5
Cobalt	0.0023	J	0.0025	0.00040	mg/L		05/11/17 14:23	05/12/17 00:06	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/11/17 14:23	05/12/17 00:06	5
Lithium	0.0049	J	0.0050	0.0032	mg/L		05/11/17 14:23	05/12/17 00:06	5
Molybdenum	0.0074	J	0.015	0.00085	mg/L		05/11/17 14:23	05/12/17 00:06	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/11/17 14:23	05/12/17 00:06	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/11/17 14:23	05/12/17 00:06	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		05/09/17 11:08	05/10/17 13:01	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	120		5.0	3.4	mg/L			04/29/17 15:11	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

**Client Sample ID: FERB-1**

**Date Collected: 04/25/17 10:30**

**Date Received: 04/27/17 09:15**

**Lab Sample ID: 400-137038-10**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			05/02/17 05:47	1
Fluoride	<0.082		0.20	0.082	mg/L			05/02/17 05:47	1
Sulfate	<0.70		1.0	0.70	mg/L			05/02/17 05:47	1

### 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		05/11/17 14:23	05/12/17 00:10	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/11/17 14:23	05/12/17 00:10	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/11/17 14:23	05/12/17 00:10	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/12/17 00:10	5
Boron	<0.021		0.050	0.021	mg/L		05/11/17 14:23	05/12/17 00:10	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/12/17 00:10	5
Calcium	<0.13		0.25	0.13	mg/L		05/11/17 14:23	05/12/17 00:10	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/11/17 14:23	05/12/17 00:10	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/11/17 14:23	05/12/17 00:10	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/11/17 14:23	05/12/17 00:10	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/11/17 14:23	05/12/17 00:10	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/11/17 14:23	05/12/17 00:10	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/11/17 14:23	05/12/17 00:10	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/11/17 14:23	05/12/17 00:10	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		05/09/17 11:08	05/10/17 13:03	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			04/29/17 15:11	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

**Client Sample ID: FB-1**

**Date Collected: 04/25/17 11:35**

**Date Received: 04/27/17 09:15**

**Lab Sample ID: 400-137038-11**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			05/03/17 22:41	1
Fluoride	<0.082		0.20	0.082	mg/L			05/03/17 22:41	1
Sulfate	<0.70		1.0	0.70	mg/L			05/03/17 22:41	1

### 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		05/11/17 14:23	05/12/17 00:15	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/11/17 14:23	05/12/17 00:15	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/11/17 14:23	05/12/17 00:15	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/12/17 00:15	5
Boron	<0.021		0.050	0.021	mg/L		05/11/17 14:23	05/12/17 00:15	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/12/17 00:15	5
Calcium	<0.13		0.25	0.13	mg/L		05/11/17 14:23	05/12/17 00:15	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/11/17 14:23	05/12/17 00:15	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/11/17 14:23	05/12/17 00:15	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/11/17 14:23	05/12/17 00:15	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/11/17 14:23	05/12/17 00:15	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/11/17 14:23	05/12/17 00:15	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/11/17 14:23	05/12/17 00:15	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/11/17 14:23	05/12/17 00:15	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		05/09/17 11:08	05/10/17 13:17	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			04/29/17 15:11	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

**Client Sample ID: DUP-1**

**Date Collected: 04/25/17 00:00**

**Date Received: 04/27/17 09:15**

**Lab Sample ID: 400-137038-12**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4		1.0	0.89	mg/L			05/03/17 23:04	1
Fluoride	0.10	J	0.20	0.082	mg/L			05/03/17 23:04	1
Sulfate	8.5		1.0	0.70	mg/L			05/03/17 23:04	1

### 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		05/11/17 14:23	05/12/17 00:19	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/11/17 14:23	05/12/17 00:19	5
Barium	0.0064		0.0025	0.00049	mg/L		05/11/17 14:23	05/12/17 00:19	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/12/17 00:19	5
Boron	<0.021		0.050	0.021	mg/L		05/11/17 14:23	05/12/17 00:19	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/12/17 00:19	5
Calcium	28		0.25	0.13	mg/L		05/11/17 14:23	05/12/17 00:19	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/11/17 14:23	05/12/17 00:19	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/11/17 14:23	05/12/17 00:19	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/11/17 14:23	05/12/17 00:19	5
Lithium	0.0039	J	0.0050	0.0032	mg/L		05/11/17 14:23	05/12/17 00:19	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/11/17 14:23	05/12/17 00:19	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/11/17 14:23	05/12/17 00:19	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/11/17 14:23	05/12/17 00:19	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		05/09/17 11:08	05/10/17 13:18	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	100		5.0	3.4	mg/L			04/29/17 14:20	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

## Qualifiers

### HPLC/IC

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.
E	Result exceeded calibration range.

### 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.

## 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 Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

**Client Sample ID: WGWA-18**

**Date Collected: 04/25/17 10:10**

**Date Received: 04/27/17 09:15**

**Lab Sample ID: 400-137038-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351964	05/02/17 01:13	TAJ	TAL PEN
Total Recoverable	Prep	3005A			353243	05/11/17 14:23	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353337	05/11/17 22:36	DRE	TAL PEN
Total/NA	Prep	7470A			352904	05/09/17 11:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	353081	05/10/17 12:31	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351822	04/29/17 15:11	TET	TAL PEN

**Client Sample ID: WGWA-4**

**Date Collected: 04/25/17 10:30**

**Date Received: 04/27/17 09:15**

**Lab Sample ID: 400-137038-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351964	05/02/17 01:58	TAJ	TAL PEN
Total Recoverable	Prep	3005A			353243	05/11/17 14:23	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353337	05/11/17 22:59	DRE	TAL PEN
Total/NA	Prep	7470A			352904	05/09/17 11:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	353081	05/10/17 12:49	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351822	04/29/17 15:11	TET	TAL PEN

**Client Sample ID: WGWA-3**

**Date Collected: 04/25/17 11:35**

**Date Received: 04/27/17 09:15**

**Lab Sample ID: 400-137038-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351964	05/02/17 02:21	TAJ	TAL PEN
Total Recoverable	Prep	3005A			353243	05/11/17 14:23	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353337	05/11/17 23:21	DRE	TAL PEN
Total/NA	Prep	7470A			352904	05/09/17 11:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	353081	05/10/17 12:51	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351822	04/29/17 15:11	TET	TAL PEN

**Client Sample ID: WGWA-5**

**Date Collected: 04/25/17 12:20**

**Date Received: 04/27/17 09:15**

**Lab Sample ID: 400-137038-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351964	05/02/17 02:44	TAJ	TAL PEN
Total Recoverable	Prep	3005A			353243	05/11/17 14:23	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353337	05/11/17 23:26	DRE	TAL PEN
Total/NA	Prep	7470A			352904	05/09/17 11:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	353081	05/10/17 12:53	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351822	04/29/17 15:11	TET	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-137038-5**

**Date Collected: 04/25/17 14:00**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351964	05/02/17 03:07	TAJ	TAL PEN
Total Recoverable	Prep	3005A			353243	05/11/17 14:23	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353337	05/11/17 23:30	DRE	TAL PEN
Total/NA	Prep	7470A			352904	05/09/17 11:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	353081	05/10/17 12:54	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351822	04/29/17 15:11	TET	TAL PEN

**Client Sample ID: WGWA-7**

**Lab Sample ID: 400-137038-6**

**Date Collected: 04/25/17 14:00**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351964	05/02/17 03:30	TAJ	TAL PEN
Total Recoverable	Prep	3005A			353243	05/11/17 14:23	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353337	05/11/17 23:35	DRE	TAL PEN
Total/NA	Prep	7470A			352904	05/09/17 11:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	353081	05/10/17 12:56	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351822	04/29/17 15:11	TET	TAL PEN

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-137038-7**

**Date Collected: 04/25/17 14:20**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351964	05/02/17 04:38	TAJ	TAL PEN
Total/NA	Analysis	300.0		20	352273	05/03/17 15:28	TAJ	TAL PEN
Total Recoverable	Prep	3005A			353243	05/11/17 14:23	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353337	05/11/17 23:39	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		353243	05/11/17 14:23	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	50	353529	05/12/17 16:25	DRE	TAL PEN
Total/NA	Prep	7470A			352904	05/09/17 11:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	353081	05/10/17 12:58	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351822	04/29/17 15:11	TET	TAL PEN

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-137038-8**

**Date Collected: 04/25/17 15:33**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351964	05/02/17 05:01	TAJ	TAL PEN
Total Recoverable	Prep	3005A			353243	05/11/17 14:23	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353337	05/12/17 00:01	DRE	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-137038-8**

**Date Collected: 04/25/17 15:33**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			352904	05/09/17 11:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	353081	05/10/17 13:00	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351822	04/29/17 15:11	TET	TAL PEN

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-137038-9**

**Date Collected: 04/25/17 16:10**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351964	05/02/17 05:24	TAJ	TAL PEN
Total Recoverable	Prep	3005A			353243	05/11/17 14:23	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353337	05/12/17 00:06	DRE	TAL PEN
Total/NA	Prep	7470A			352904	05/09/17 11:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	353081	05/10/17 13:01	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351822	04/29/17 15:11	TET	TAL PEN

**Client Sample ID: FERB-1**

**Lab Sample ID: 400-137038-10**

**Date Collected: 04/25/17 10:30**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351964	05/02/17 05:47	TAJ	TAL PEN
Total Recoverable	Prep	3005A			353243	05/11/17 14:23	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353337	05/12/17 00:10	DRE	TAL PEN
Total/NA	Prep	7470A			352904	05/09/17 11:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	353081	05/10/17 13:03	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351822	04/29/17 15:11	TET	TAL PEN

**Client Sample ID: FB-1**

**Lab Sample ID: 400-137038-11**

**Date Collected: 04/25/17 11:35**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	352273	05/03/17 22:41	TAJ	TAL PEN
Total Recoverable	Prep	3005A			353243	05/11/17 14:23	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353337	05/12/17 00:15	DRE	TAL PEN
Total/NA	Prep	7470A			352904	05/09/17 11:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	353081	05/10/17 13:17	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351822	04/29/17 15:11	TET	TAL PEN

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

**Client Sample ID: DUP-1**

**Lab Sample ID: 400-137038-12**

**Date Collected: 04/25/17 00:00**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	352273	05/03/17 23:04	TAJ	TAL PEN
Total Recoverable	Prep	3005A			353243	05/11/17 14:23	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353337	05/12/17 00:19	DRE	TAL PEN
Total/NA	Prep	7470A			352904	05/09/17 11:08	JAP	TAL PEN
Total/NA	Analysis	7470A		1	353081	05/10/17 13:18	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351821	04/29/17 14:20	TET	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 Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

## HPLC/IC

### Analysis Batch: 351964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137038-1	WGWA-18	Total/NA	Water	300.0	
400-137038-2	WGWA-4	Total/NA	Water	300.0	
400-137038-3	WGWA-3	Total/NA	Water	300.0	
400-137038-4	WGWA-5	Total/NA	Water	300.0	
400-137038-5	WGWA-6	Total/NA	Water	300.0	
400-137038-6	WGWA-7	Total/NA	Water	300.0	
400-137038-7	WGWC-16	Total/NA	Water	300.0	
400-137038-8	WGWC-15	Total/NA	Water	300.0	
400-137038-9	WGWC-17	Total/NA	Water	300.0	
400-137038-10	FERB-1	Total/NA	Water	300.0	
MB 400-351964/4	Method Blank	Total/NA	Water	300.0	
LCS 400-351964/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-351964/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-137193-G-12 MS	Matrix Spike	Total/NA	Water	300.0	
400-137193-G-12 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 352273

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137038-7	WGWC-16	Total/NA	Water	300.0	
400-137038-11	FB-1	Total/NA	Water	300.0	
400-137038-12	DUP-1	Total/NA	Water	300.0	
MB 400-352273/4	Method Blank	Total/NA	Water	300.0	
LCS 400-352273/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-352273/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-137343-E-1 MS	Matrix Spike	Total/NA	Water	300.0	
400-137343-E-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

## Metals

### Prep Batch: 352904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137038-1	WGWA-18	Total/NA	Water	7470A	
400-137038-2	WGWA-4	Total/NA	Water	7470A	
400-137038-3	WGWA-3	Total/NA	Water	7470A	
400-137038-4	WGWA-5	Total/NA	Water	7470A	
400-137038-5	WGWA-6	Total/NA	Water	7470A	
400-137038-6	WGWA-7	Total/NA	Water	7470A	
400-137038-7	WGWC-16	Total/NA	Water	7470A	
400-137038-8	WGWC-15	Total/NA	Water	7470A	
400-137038-9	WGWC-17	Total/NA	Water	7470A	
400-137038-10	FERB-1	Total/NA	Water	7470A	
400-137038-11	FB-1	Total/NA	Water	7470A	
400-137038-12	DUP-1	Total/NA	Water	7470A	
MB 400-352904/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-352904/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-137038-1 MS	WGWA-18	Total/NA	Water	7470A	
400-137038-1 MSD	WGWA-18	Total/NA	Water	7470A	

# QC Association Summary

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
 SDG: Ash Pond

## Metals (Continued)

### Analysis Batch: 353081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137038-1	WGWA-18	Total/NA	Water	7470A	352904
400-137038-2	WGWA-4	Total/NA	Water	7470A	352904
400-137038-3	WGWA-3	Total/NA	Water	7470A	352904
400-137038-4	WGWA-5	Total/NA	Water	7470A	352904
400-137038-5	WGWA-6	Total/NA	Water	7470A	352904
400-137038-6	WGWA-7	Total/NA	Water	7470A	352904
400-137038-7	WGWC-16	Total/NA	Water	7470A	352904
400-137038-8	WGWC-15	Total/NA	Water	7470A	352904
400-137038-9	WGWC-17	Total/NA	Water	7470A	352904
400-137038-10	FERB-1	Total/NA	Water	7470A	352904
400-137038-11	FB-1	Total/NA	Water	7470A	352904
400-137038-12	DUP-1	Total/NA	Water	7470A	352904
MB 400-352904/14-A	Method Blank	Total/NA	Water	7470A	352904
LCS 400-352904/15-A	Lab Control Sample	Total/NA	Water	7470A	352904
400-137038-1 MS	WGWA-18	Total/NA	Water	7470A	352904
400-137038-1 MSD	WGWA-18	Total/NA	Water	7470A	352904

### Prep Batch: 353243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137038-1	WGWA-18	Total Recoverable	Water	3005A	
400-137038-2	WGWA-4	Total Recoverable	Water	3005A	
400-137038-3	WGWA-3	Total Recoverable	Water	3005A	
400-137038-4	WGWA-5	Total Recoverable	Water	3005A	
400-137038-5	WGWA-6	Total Recoverable	Water	3005A	
400-137038-6	WGWA-7	Total Recoverable	Water	3005A	
400-137038-7	WGWC-16	Total Recoverable	Water	3005A	
400-137038-7 - DL	WGWC-16	Total Recoverable	Water	3005A	
400-137038-8	WGWC-15	Total Recoverable	Water	3005A	
400-137038-9	WGWC-17	Total Recoverable	Water	3005A	
400-137038-10	FERB-1	Total Recoverable	Water	3005A	
400-137038-11	FB-1	Total Recoverable	Water	3005A	
400-137038-12	DUP-1	Total Recoverable	Water	3005A	
MB 400-353243/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-353243/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-137038-2 MS	WGWA-4	Total Recoverable	Water	3005A	
400-137038-2 MSD	WGWA-4	Total Recoverable	Water	3005A	

### Analysis Batch: 353337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137038-1	WGWA-18	Total Recoverable	Water	6020	353243
400-137038-2	WGWA-4	Total Recoverable	Water	6020	353243
400-137038-3	WGWA-3	Total Recoverable	Water	6020	353243
400-137038-4	WGWA-5	Total Recoverable	Water	6020	353243
400-137038-5	WGWA-6	Total Recoverable	Water	6020	353243
400-137038-6	WGWA-7	Total Recoverable	Water	6020	353243
400-137038-7	WGWC-16	Total Recoverable	Water	6020	353243
400-137038-8	WGWC-15	Total Recoverable	Water	6020	353243
400-137038-9	WGWC-17	Total Recoverable	Water	6020	353243
400-137038-10	FERB-1	Total Recoverable	Water	6020	353243
400-137038-11	FB-1	Total Recoverable	Water	6020	353243
400-137038-12	DUP-1	Total Recoverable	Water	6020	353243

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

## Metals (Continued)

### Analysis Batch: 353337 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-353243/1-A ^5	Method Blank	Total Recoverable	Water	6020	353243
LCS 400-353243/2-A	Lab Control Sample	Total Recoverable	Water	6020	353243
400-137038-2 MS	WGWA-4	Total Recoverable	Water	6020	353243
400-137038-2 MSD	WGWA-4	Total Recoverable	Water	6020	353243

### Analysis Batch: 353529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137038-7 - DL	WGWC-16	Total Recoverable	Water	6020	353243

## General Chemistry

### Analysis Batch: 351821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137038-12	DUP-1	Total/NA	Water	SM 2540C	
MB 400-351821/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-351821/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-136962-D-9 DU	Duplicate	Total/NA	Water	SM 2540C	

### Analysis Batch: 351822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137038-1	WGWA-18	Total/NA	Water	SM 2540C	
400-137038-2	WGWA-4	Total/NA	Water	SM 2540C	
400-137038-3	WGWA-3	Total/NA	Water	SM 2540C	
400-137038-4	WGWA-5	Total/NA	Water	SM 2540C	
400-137038-5	WGWA-6	Total/NA	Water	SM 2540C	
400-137038-6	WGWA-7	Total/NA	Water	SM 2540C	
400-137038-7	WGWC-16	Total/NA	Water	SM 2540C	
400-137038-8	WGWC-15	Total/NA	Water	SM 2540C	
400-137038-9	WGWC-17	Total/NA	Water	SM 2540C	
400-137038-10	FERB-1	Total/NA	Water	SM 2540C	
400-137038-11	FB-1	Total/NA	Water	SM 2540C	
MB 400-351822/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-351822/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-137038-1 DU	WGWA-18	Total/NA	Water	SM 2540C	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 400-351964/4**  
**Matrix: Water**  
**Analysis Batch: 351964**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			05/01/17 19:27	1
Fluoride	<0.082		0.20	0.082	mg/L			05/01/17 19:27	1
Sulfate	<0.70		1.0	0.70	mg/L			05/01/17 19:27	1

**Lab Sample ID: LCS 400-351964/5**  
**Matrix: Water**  
**Analysis Batch: 351964**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.0		mg/L		100	90 - 110
Fluoride	10.0	10.9		mg/L		109	90 - 110
Sulfate	10.0	10.5		mg/L		105	90 - 110

**Lab Sample ID: LCSD 400-351964/6**  
**Matrix: Water**  
**Analysis Batch: 351964**

**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	10.0	9.48		mg/L		95	90 - 110	6	15
Fluoride	10.0	10.4		mg/L		104	90 - 110	5	15
Sulfate	10.0	9.89		mg/L		99	90 - 110	6	15

**Lab Sample ID: 400-137193-G-12 MS**  
**Matrix: Water**  
**Analysis Batch: 351964**

**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	76		50.0	121		mg/L		90	80 - 120
Fluoride	<0.41		50.0	53.4		mg/L		107	80 - 120
Sulfate	170		50.0	218		mg/L		97	80 - 120

**Lab Sample ID: 400-137193-G-12 MSD**  
**Matrix: Water**  
**Analysis Batch: 351964**

**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	76		50.0	121		mg/L		92	80 - 120	1	20
Fluoride	<0.41		50.0	53.7		mg/L		107	80 - 120	1	20
Sulfate	170		50.0	219		mg/L		100	80 - 120	1	20

**Lab Sample ID: MB 400-352273/4**  
**Matrix: Water**  
**Analysis Batch: 352273**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			05/03/17 12:02	1
Fluoride	<0.082		0.20	0.082	mg/L			05/03/17 12:02	1
Sulfate	<0.70		1.0	0.70	mg/L			05/03/17 12:02	1

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 400-352273/5**  
**Matrix: Water**  
**Analysis Batch: 352273**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.0		mg/L		100	90 - 110
Fluoride	10.0	10.4		mg/L		104	90 - 110
Sulfate	10.0	10.3		mg/L		103	90 - 110

**Lab Sample ID: LCSD 400-352273/6**  
**Matrix: Water**  
**Analysis Batch: 352273**

**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	10.0	10.0		mg/L		100	90 - 110	0	15
Fluoride	10.0	10.4		mg/L		104	90 - 110	1	15
Sulfate	10.0	10.2		mg/L		102	90 - 110	0	15

**Lab Sample ID: 400-137343-E-1 MS**  
**Matrix: Water**  
**Analysis Batch: 352273**

**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	720	E	100	819	E 4	mg/L		100	80 - 120
Fluoride	<0.82		100	107		mg/L		107	80 - 120
Sulfate	<7.0		100	106		mg/L		106	80 - 120

**Lab Sample ID: 400-137343-E-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 352273**

**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	720	E	100	822	E 4	mg/L		102	80 - 120	0	20
Fluoride	<0.82		100	108		mg/L		108	80 - 120	1	20
Sulfate	<7.0		100	104		mg/L		104	80 - 120	2	20

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 400-353243/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 353337**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 353243**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/11/17 14:23	05/11/17 22:27	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/11/17 14:23	05/11/17 22:27	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/11/17 14:23	05/11/17 22:27	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/11/17 22:27	5
Boron	<0.021		0.050	0.021	mg/L		05/11/17 14:23	05/11/17 22:27	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/11/17 14:23	05/11/17 22:27	5
Calcium	<0.13		0.25	0.13	mg/L		05/11/17 14:23	05/11/17 22:27	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/11/17 14:23	05/11/17 22:27	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/11/17 14:23	05/11/17 22:27	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/11/17 14:23	05/11/17 22:27	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/11/17 14:23	05/11/17 22:27	5

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 400-353243/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 353337**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 353243**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/11/17 14:23	05/11/17 22:27	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/11/17 14:23	05/11/17 22:27	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/11/17 14:23	05/11/17 22:27	5

**Lab Sample ID: LCS 400-353243/2-A**  
**Matrix: Water**  
**Analysis Batch: 353337**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 353243**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0536		mg/L		107	80 - 120
Arsenic	0.0500	0.0505		mg/L		101	80 - 120
Barium	0.0500	0.0504		mg/L		101	80 - 120
Beryllium	0.0500	0.0487		mg/L		97	80 - 120
Boron	0.100	0.0962		mg/L		96	80 - 120
Cadmium	0.0500	0.0500		mg/L		100	80 - 120
Calcium	5.00	5.18		mg/L		104	80 - 120
Chromium	0.0500	0.0477		mg/L		95	80 - 120
Cobalt	0.0500	0.0485		mg/L		97	80 - 120
Lead	0.0500	0.0499		mg/L		100	80 - 120
Lithium	0.0500	0.0522		mg/L		104	80 - 120
Molybdenum	0.100	0.0992		mg/L		99	80 - 120
Selenium	0.0500	0.0502		mg/L		100	80 - 120
Thallium	0.0100	0.0102		mg/L		102	80 - 120

**Lab Sample ID: 400-137038-2 MS**  
**Matrix: Water**  
**Analysis Batch: 353337**

**Client Sample ID: WGWA-4**  
**Prep Type: Total Recoverable**  
**Prep Batch: 353243**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0557		mg/L		111	75 - 125
Arsenic	<0.00046		0.0500	0.0509		mg/L		102	75 - 125
Barium	0.0056		0.0500	0.0563		mg/L		101	75 - 125
Beryllium	<0.00034		0.0500	0.0487		mg/L		97	75 - 125
Boron	<0.021		0.100	0.0993		mg/L		99	75 - 125
Cadmium	<0.00034		0.0500	0.0500		mg/L		100	75 - 125
Calcium	17		5.00	22.1		mg/L		104	75 - 125
Chromium	<0.0011		0.0500	0.0473		mg/L		95	75 - 125
Cobalt	<0.00040		0.0500	0.0487		mg/L		97	75 - 125
Lead	<0.00035		0.0500	0.0488		mg/L		98	75 - 125
Lithium	0.0037	J	0.0500	0.0459		mg/L		84	75 - 125
Molybdenum	<0.00085		0.100	0.101		mg/L		101	75 - 125
Selenium	<0.00024		0.0500	0.0520		mg/L		104	75 - 125
Thallium	<0.000085		0.0100	0.0101		mg/L		101	75 - 125

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 400-137038-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 353337**

**Client Sample ID: WGWA-4**  
**Prep Type: Total Recoverable**  
**Prep Batch: 353243**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0549		mg/L		110	75 - 125	1	20
Arsenic	<0.00046		0.0500	0.0514		mg/L		103	75 - 125	1	20
Barium	0.0056		0.0500	0.0572		mg/L		103	75 - 125	2	20
Beryllium	<0.00034		0.0500	0.0496		mg/L		99	75 - 125	2	20
Boron	<0.021		0.100	0.0994		mg/L		99	75 - 125	0	20
Cadmium	<0.00034		0.0500	0.0506		mg/L		101	75 - 125	1	20
Calcium	17		5.00	22.1		mg/L		104	75 - 125	0	20
Chromium	<0.0011		0.0500	0.0481		mg/L		96	75 - 125	2	20
Cobalt	<0.00040		0.0500	0.0490		mg/L		98	75 - 125	1	20
Lead	<0.00035		0.0500	0.0492		mg/L		98	75 - 125	1	20
Lithium	0.0037	J	0.0500	0.0463		mg/L		85	75 - 125	1	20
Molybdenum	<0.00085		0.100	0.102		mg/L		102	75 - 125	1	20
Selenium	<0.00024		0.0500	0.0516		mg/L		103	75 - 125	1	20
Thallium	<0.000085		0.0100	0.0105		mg/L		105	75 - 125	4	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 400-352904/14-A**  
**Matrix: Water**  
**Analysis Batch: 353081**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 352904**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/09/17 11:08	05/10/17 12:27	1

**Lab Sample ID: LCS 400-352904/15-A**  
**Matrix: Water**  
**Analysis Batch: 353081**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 352904**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.000937		mg/L		93	80 - 120

**Lab Sample ID: 400-137038-1 MS**  
**Matrix: Water**  
**Analysis Batch: 353081**

**Client Sample ID: WGWA-18**  
**Prep Type: Total/NA**  
**Prep Batch: 352904**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00189		mg/L		94	80 - 120

**Lab Sample ID: 400-137038-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 353081**

**Client Sample ID: WGWA-18**  
**Prep Type: Total/NA**  
**Prep Batch: 352904**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00190		mg/L		94	80 - 120	0	20

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 400-351821/1**  
**Matrix: Water**  
**Analysis Batch: 351821**

**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			04/29/17 14:20	1

**Lab Sample ID: LCS 400-351821/2**  
**Matrix: Water**  
**Analysis Batch: 351821**

**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: 400-136962-D-9 DU**  
**Matrix: Water**  
**Analysis Batch: 351821**

**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

**Lab Sample ID: MB 400-351822/1**  
**Matrix: Water**  
**Analysis Batch: 351822**

**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			04/29/17 15:11	1

**Lab Sample ID: LCS 400-351822/2**  
**Matrix: Water**  
**Analysis Batch: 351822**

**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	258		mg/L		88	78 - 122

**Lab Sample ID: 400-137038-1 DU**  
**Matrix: Water**  
**Analysis Batch: 351822**

**Client Sample ID: WGWA-18**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	70		68.0		mg/L		3	5



**TestAmerica Pensacola**  
 3355 McLemore Drive  
 Pensacola, FL 32514  
 Phone (850) 474-1001 Fax (850) 478-2671

### Chain of Custody Record

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING

**Client Information**  
 Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State/Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

**Sampler:** T. Payne TP, T. Thomas TT, M. Burch MB  
**Lab PM:** Whitmire, Cheyenne R  
**Phone:** cheyenne.whitmire@testamericainc.com  
**E-Mail:** cheyenne.whitmire@testamericainc.com

**Due Date Requested:**  
 TAT Requested (days):  
 PO #:  
 WO #:  
 Project #:  
 SSOW#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Organism, etc.)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TDS - SM 2540C: Cl, F, SO4 - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320
WGWA-18	4/25/17	1010	G	W		X	X	X	X	X
WGWA-4	4/25/17	1030	G	W		X	X	X	X	X
WGWA-3	4/25/17	1135	G	W		X	X	X	X	X
WGWA-5	4/25/17	1220	G	W		X	X	X	X	X
WGWA-6	4/25/17	1400	G	W		X	X	X	X	X
WGWA-7	4/25/17	1400	G	W		X	X	X	X	X
WGWC-16	4/25/17	1420	G	W		X	X	X	X	X
WGWC-15	4/25/17	1533	G	W		X	X	X	X	X
WGWC-17	4/25/17	1610	G	W		X	X	X	X	X
FERB-1	4/25/17	1030	G	W		X	X	X	X	X
FB-1	4/25/17	1135	G	W		X	X	X	X	X
DUP-1	4/25/17	--	G	W		X	X	X	X	X

**Analysis Requested**  
 Total Number of Containers: 4  
 Special Instructions/Note:  
 Level IV Data Package Required. Extra radium sample collected for lab QA/QC  
 Level IV Data Package Required  
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 Level IV Data Package Required  
 Level IV Data Package Required

**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:

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III(IV), Other (specify) \_\_\_\_\_ Level IV Data Package Required

**Empty Kit Relinquished by:** \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: 4/26/17 - 1235 Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: 4/26/17 1600 Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

**Custody Seals Intact:**  Yes  No  
 Cooler Temperature(s) °C and Other Remarks: 2-8, 2.0, 2.2

681-Atlanta



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-137038-1

SDG Number: Ash Pond

**Login Number: 137038**

**List Number: 1**

**Creator: Siddoway, Benjamin**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8°C, 2.2°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 Wansley

TestAmerica Job ID: 400-137038-1  
SDG: Ash Pond

## 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	06-30-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17 *
West Virginia DEP	State Program	3	136	06-30-17

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-137038-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR - Plant Wansley

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

5/31/2017 5:44:07 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

Review your project  
results through

Total Access

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[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Method Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-2  
SDG: Ash Pond

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 Wansley

TestAmerica Job ID: 400-137038-2  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-137038-1	WGWA-18	Water	04/25/17 10:10	04/27/17 09:15
400-137038-2	WGWA-4	Water	04/25/17 10:30	04/27/17 09:15
400-137038-3	WGWA-3	Water	04/25/17 11:35	04/27/17 09:15
400-137038-4	WGWA-5	Water	04/25/17 12:20	04/27/17 09:15
400-137038-5	WGWA-6	Water	04/25/17 14:00	04/27/17 09:15
400-137038-6	WGWA-7	Water	04/25/17 14:00	04/27/17 09:15
400-137038-7	WGWC-16	Water	04/25/17 14:20	04/27/17 09:15
400-137038-8	WGWC-15	Water	04/25/17 15:33	04/27/17 09:15
400-137038-9	WGWC-17	Water	04/25/17 16:10	04/27/17 09:15
400-137038-10	FERB-1	Water	04/25/17 10:30	04/27/17 09:15
400-137038-11	FB-1	Water	04/25/17 11:35	04/27/17 09:15
400-137038-12	DUP-1	Water	04/25/17 00:00	04/27/17 09:15

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-2  
 SDG: Ash Pond

**Client Sample ID: WGWA-18**  
**Date Collected: 04/25/17 10:10**  
**Date Received: 04/27/17 09:15**

**Lab Sample ID: 400-137038-1**  
**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	0.131		0.0633	0.0644	1.00	0.0510	pCi/L	05/04/17 10:53	05/26/17 08:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					05/04/17 10:53	05/26/17 08:41	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0211	U	0.199	0.199	1.00	0.360	pCi/L	05/04/17 11:11	05/18/17 13:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.1		40 - 110					05/04/17 11:11	05/18/17 13:33	1
Y Carrier	87.1		40 - 110					05/04/17 11:11	05/18/17 13:33	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.109	U	0.209	0.209	5.00	0.360	pCi/L		05/26/17 12:36	1



# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-2  
 SDG: Ash Pond

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-137038-2**

Date Collected: 04/25/17 10:30

Matrix: Water

Date Received: 04/27/17 09:15

### Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.484		0.124	0.131	1.00	0.0766	pCi/L	05/04/17 10:53	05/26/17 08:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					05/04/17 10:53	05/26/17 08:41	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.644		0.259	0.266	1.00	0.363	pCi/L	05/04/17 11:11	05/18/17 13:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					05/04/17 11:11	05/18/17 13:34	1
Y Carrier	83.7		40 - 110					05/04/17 11:11	05/18/17 13:34	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.13		0.287	0.297	5.00	0.363	pCi/L		05/26/17 12:36	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-2  
 SDG: Ash Pond

**Client Sample ID: WGWA-3**

**Lab Sample ID: 400-137038-3**

**Date Collected: 04/25/17 11:35**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0227	U	0.0400	0.0401	1.00	0.0721	pCi/L	05/04/17 10:53	05/26/17 08:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					05/04/17 10:53	05/26/17 08:41	1

**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	0.209	1.00	0.340	pCi/L	05/04/17 11:11	05/18/17 13:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					05/04/17 11:11	05/18/17 13:34	1
Y Carrier	85.6		40 - 110					05/04/17 11:11	05/18/17 13:34	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.224	U	0.212	0.213	5.00	0.340	pCi/L		05/26/17 12:36	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-2  
 SDG: Ash Pond

**Client Sample ID: WGWA-5**

**Lab Sample ID: 400-137038-4**

**Date Collected: 04/25/17 12:20**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0174	U	0.0478	0.0479	1.00	0.0907	pCi/L	05/04/17 10:53	05/26/17 08:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					05/04/17 10:53	05/26/17 08:41	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0875	U	0.258	0.258	1.00	0.442	pCi/L	05/04/17 11:11	05/18/17 13:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					05/04/17 11:11	05/18/17 13:34	1
Y Carrier	86.4		40 - 110					05/04/17 11:11	05/18/17 13:34	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.105	U	0.262	0.262	5.00	0.442	pCi/L		05/26/17 12:36	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-2  
 SDG: Ash Pond

**Client Sample ID: WGWA-6**  
**Date Collected: 04/25/17 14:00**  
**Date Received: 04/27/17 09:15**

**Lab Sample ID: 400-137038-5**  
**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	2.77		0.287	0.380	1.00	0.0829	pCi/L	05/04/17 10:53	05/26/17 08:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					05/04/17 10:53	05/26/17 08:42	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	5.46		0.515	0.719	1.00	0.384	pCi/L	05/04/17 11:11	05/18/17 13:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					05/04/17 11:11	05/18/17 13:34	1
Y Carrier	88.6		40 - 110					05/04/17 11:11	05/18/17 13:34	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	8.22		0.590	0.814	5.00	0.384	pCi/L		05/26/17 12:36	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-2  
SDG: Ash Pond

**Client Sample ID: WGWA-7**

**Date Collected: 04/25/17 14:00**

**Date Received: 04/27/17 09:15**

**Lab Sample ID: 400-137038-6**

**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	0.0422	U	0.102	0.102	1.00	0.189	pCi/L	05/04/17 10:53	05/26/17 08:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	46.9		40 - 110					05/04/17 10:53	05/26/17 08:45	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0450	U	0.461	0.461	1.00	0.813	pCi/L	05/04/17 11:11	05/18/17 13:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	46.9		40 - 110					05/04/17 11:11	05/18/17 13:34	1
Y Carrier	86.0		40 - 110					05/04/17 11:11	05/18/17 13:34	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0872	U	0.472	0.472	5.00	0.813	pCi/L		05/26/17 12:36	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-2  
SDG: Ash Pond

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-137038-7**

Date Collected: 04/25/17 14:20

Matrix: Water

Date Received: 04/27/17 09:15

### Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.197		0.0870	0.0888	1.00	0.0936	pCi/L	05/04/17 10:53	05/26/17 08:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					05/04/17 10:53	05/26/17 08:45	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.681		0.264	0.271	1.00	0.368	pCi/L	05/04/17 11:11	05/18/17 13:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					05/04/17 11:11	05/18/17 13:34	1
Y Carrier	88.6		40 - 110					05/04/17 11:11	05/18/17 13:34	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.878		0.278	0.286	5.00	0.368	pCi/L		05/26/17 12:36	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-2  
 SDG: Ash Pond

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-137038-8**

**Date Collected: 04/25/17 15:33**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0826	U	0.0670	0.0675	1.00	0.0983	pCi/L	05/04/17 10:53	05/26/17 08:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/04/17 10:53	05/26/17 08:45	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.433		0.229	0.232	1.00	0.341	pCi/L	05/04/17 11:11	05/18/17 13:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/04/17 11:11	05/18/17 13:34	1
Y Carrier	87.9		40 - 110					05/04/17 11:11	05/18/17 13:34	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.515		0.239	0.242	5.00	0.341	pCi/L		05/26/17 12:36	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-2  
SDG: Ash Pond

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-137038-9**

**Date Collected: 04/25/17 16:10**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00821	U	0.0517	0.0517	1.00	0.103	pCi/L	05/04/17 10:53	05/26/17 08:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					05/04/17 10:53	05/26/17 08:45	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.220	U	0.288	0.289	1.00	0.479	pCi/L	05/04/17 11:11	05/18/17 13:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.7		40 - 110					05/04/17 11:11	05/18/17 13:34	1
Y Carrier	76.3		40 - 110					05/04/17 11:11	05/18/17 13:34	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.228	U	0.293	0.294	5.00	0.479	pCi/L		05/26/17 12:36	1



# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-2  
 SDG: Ash Pond

**Client Sample ID: FERB-1**

**Lab Sample ID: 400-137038-10**

**Date Collected: 04/25/17 10:30**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

### Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0239	U	0.0330	0.0331	1.00	0.0890	pCi/L	05/04/17 10:53	05/26/17 08:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					05/04/17 10:53	05/26/17 08:45	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0650	U	0.193	0.193	1.00	0.335	pCi/L	05/04/17 11:11	05/18/17 13:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					05/04/17 11:11	05/18/17 13:34	1
Y Carrier	88.6		40 - 110					05/04/17 11:11	05/18/17 13:34	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0412	U	0.196	0.196	5.00	0.335	pCi/L		05/26/17 12:36	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-2  
SDG: Ash Pond

**Client Sample ID: FB-1**

**Date Collected: 04/25/17 11:35**

**Date Received: 04/27/17 09:15**

**Lab Sample ID: 400-137038-11**

**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	-0.0291	U	0.0304	0.0305	1.00	0.0891	pCi/L	05/04/17 10:53	05/26/17 08:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					05/04/17 10:53	05/26/17 08:45	1

**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	0.193	0.193	1.00	0.323	pCi/L	05/04/17 11:11	05/18/17 13:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					05/04/17 11:11	05/18/17 13:34	1
Y Carrier	90.8		40 - 110					05/04/17 11:11	05/18/17 13:34	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.104	U	0.195	0.195	5.00	0.323	pCi/L		05/26/17 12:36	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-2  
SDG: Ash Pond

**Client Sample ID: DUP-1**

**Date Collected: 04/25/17 00:00**

**Date Received: 04/27/17 09:15**

**Lab Sample ID: 400-137038-12**

**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	2.78		0.277	0.373	1.00	0.0739	pCi/L	05/04/17 10:53	05/26/17 08:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					05/04/17 10:53	05/26/17 08:45	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.23		0.442	0.589	1.00	0.348	pCi/L	05/04/17 11:11	05/18/17 13:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					05/04/17 11:11	05/18/17 13:35	1
Y Carrier	86.4		40 - 110					05/04/17 11:11	05/18/17 13:35	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	7.01		0.521	0.697	5.00	0.348	pCi/L		05/26/17 12:36	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-2  
SDG: Ash Pond

## Qualifiers

### Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-2  
SDG: Ash Pond

**Client Sample ID: WGWA-18**

**Date Collected: 04/25/17 10:10**

**Date Received: 04/27/17 09:15**

**Lab Sample ID: 400-137038-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307235	05/04/17 10:53	LDE	TAL SL
Total/NA	Analysis	9315		1	310745	05/26/17 08:41	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307239	05/04/17 11:11	LDE	TAL SL
Total/NA	Analysis	9320		1	309197	05/18/17 13:33	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

**Client Sample ID: WGWA-4**

**Date Collected: 04/25/17 10:30**

**Date Received: 04/27/17 09:15**

**Lab Sample ID: 400-137038-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307235	05/04/17 10:53	LDE	TAL SL
Total/NA	Analysis	9315		1	310745	05/26/17 08:41	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307239	05/04/17 11:11	LDE	TAL SL
Total/NA	Analysis	9320		1	309197	05/18/17 13:34	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

**Client Sample ID: WGWA-3**

**Date Collected: 04/25/17 11:35**

**Date Received: 04/27/17 09:15**

**Lab Sample ID: 400-137038-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307235	05/04/17 10:53	LDE	TAL SL
Total/NA	Analysis	9315		1	310745	05/26/17 08:41	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307239	05/04/17 11:11	LDE	TAL SL
Total/NA	Analysis	9320		1	309197	05/18/17 13:34	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

**Client Sample ID: WGWA-5**

**Date Collected: 04/25/17 12:20**

**Date Received: 04/27/17 09:15**

**Lab Sample ID: 400-137038-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307235	05/04/17 10:53	LDE	TAL SL
Total/NA	Analysis	9315		1	310745	05/26/17 08:41	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307239	05/04/17 11:11	LDE	TAL SL
Total/NA	Analysis	9320		1	309197	05/18/17 13:34	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-2  
SDG: Ash Pond

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-137038-5**

**Date Collected: 04/25/17 14:00**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307235	05/04/17 10:53	LDE	TAL SL
Total/NA	Analysis	9315		1	310745	05/26/17 08:42	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307239	05/04/17 11:11	LDE	TAL SL
Total/NA	Analysis	9320		1	309197	05/18/17 13:34	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

**Client Sample ID: WGWA-7**

**Lab Sample ID: 400-137038-6**

**Date Collected: 04/25/17 14:00**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307235	05/04/17 10:53	LDE	TAL SL
Total/NA	Analysis	9315		1	310746	05/26/17 08:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307239	05/04/17 11:11	LDE	TAL SL
Total/NA	Analysis	9320		1	309197	05/18/17 13:34	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-137038-7**

**Date Collected: 04/25/17 14:20**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307235	05/04/17 10:53	LDE	TAL SL
Total/NA	Analysis	9315		1	310746	05/26/17 08:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307239	05/04/17 11:11	LDE	TAL SL
Total/NA	Analysis	9320		1	309197	05/18/17 13:34	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-137038-8**

**Date Collected: 04/25/17 15:33**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307235	05/04/17 10:53	LDE	TAL SL
Total/NA	Analysis	9315		1	310746	05/26/17 08:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307239	05/04/17 11:11	LDE	TAL SL
Total/NA	Analysis	9320		1	309197	05/18/17 13:34	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-2  
SDG: Ash Pond

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-137038-9**

**Date Collected: 04/25/17 16:10**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307235	05/04/17 10:53	LDE	TAL SL
Total/NA	Analysis	9315		1	310746	05/26/17 08:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307239	05/04/17 11:11	LDE	TAL SL
Total/NA	Analysis	9320		1	309197	05/18/17 13:34	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

**Client Sample ID: FERB-1**

**Lab Sample ID: 400-137038-10**

**Date Collected: 04/25/17 10:30**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307235	05/04/17 10:53	LDE	TAL SL
Total/NA	Analysis	9315		1	310746	05/26/17 08:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307239	05/04/17 11:11	LDE	TAL SL
Total/NA	Analysis	9320		1	309197	05/18/17 13:34	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

**Client Sample ID: FB-1**

**Lab Sample ID: 400-137038-11**

**Date Collected: 04/25/17 11:35**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307235	05/04/17 10:53	LDE	TAL SL
Total/NA	Analysis	9315		1	310746	05/26/17 08:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307239	05/04/17 11:11	LDE	TAL SL
Total/NA	Analysis	9320		1	309197	05/18/17 13:34	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

**Client Sample ID: DUP-1**

**Lab Sample ID: 400-137038-12**

**Date Collected: 04/25/17 00:00**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307235	05/04/17 10:53	LDE	TAL SL
Total/NA	Analysis	9315		1	310746	05/26/17 08:45	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307239	05/04/17 11:11	LDE	TAL SL
Total/NA	Analysis	9320		1	309197	05/18/17 13:35	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	310927	05/26/17 12:36	RTM	TAL SL

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# QC Association Summary

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-2  
 SDG: Ash Pond

## Rad

### Prep Batch: 307235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137038-1	WGWA-18	Total/NA	Water	PrecSep-21	
400-137038-2	WGWA-4	Total/NA	Water	PrecSep-21	
400-137038-3	WGWA-3	Total/NA	Water	PrecSep-21	
400-137038-4	WGWA-5	Total/NA	Water	PrecSep-21	
400-137038-5	WGWA-6	Total/NA	Water	PrecSep-21	
400-137038-6	WGWA-7	Total/NA	Water	PrecSep-21	
400-137038-7	WGWC-16	Total/NA	Water	PrecSep-21	
400-137038-8	WGWC-15	Total/NA	Water	PrecSep-21	
400-137038-9	WGWC-17	Total/NA	Water	PrecSep-21	
400-137038-10	FERB-1	Total/NA	Water	PrecSep-21	
400-137038-11	FB-1	Total/NA	Water	PrecSep-21	
400-137038-12	DUP-1	Total/NA	Water	PrecSep-21	
MB 160-307235/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-307235/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-137038-1 DU	WGWA-18	Total/NA	Water	PrecSep-21	

### Prep Batch: 307239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137038-1	WGWA-18	Total/NA	Water	PrecSep_0	
400-137038-2	WGWA-4	Total/NA	Water	PrecSep_0	
400-137038-3	WGWA-3	Total/NA	Water	PrecSep_0	
400-137038-4	WGWA-5	Total/NA	Water	PrecSep_0	
400-137038-5	WGWA-6	Total/NA	Water	PrecSep_0	
400-137038-6	WGWA-7	Total/NA	Water	PrecSep_0	
400-137038-7	WGWC-16	Total/NA	Water	PrecSep_0	
400-137038-8	WGWC-15	Total/NA	Water	PrecSep_0	
400-137038-9	WGWC-17	Total/NA	Water	PrecSep_0	
400-137038-10	FERB-1	Total/NA	Water	PrecSep_0	
400-137038-11	FB-1	Total/NA	Water	PrecSep_0	
400-137038-12	DUP-1	Total/NA	Water	PrecSep_0	
MB 160-307239/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-307239/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-137038-1 DU	WGWA-18	Total/NA	Water	PrecSep_0	



# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-2  
SDG: Ash Pond

## Method: 9315 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-307235/1-A**  
**Matrix: Water**  
**Analysis Batch: 310745**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 307235**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.005473	U	0.0575	0.0575	1.00	0.117	pCi/L	05/04/17 10:53	05/26/17 08:41	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/04/17 10:53	05/26/17 08:41	1

**Lab Sample ID: LCS 160-307235/2-A**  
**Matrix: Water**  
**Analysis Batch: 310745**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 307235**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	11.04		1.14	1.00	0.0842	pCi/L	97	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	101		40 - 110						

**Lab Sample ID: 400-137038-1 DU**  
**Matrix: Water**  
**Analysis Batch: 310745**

**Client Sample ID: WGWA-18**  
**Prep Type: Total/NA**  
**Prep Batch: 307235**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.131		0.08410		0.0548	1.00	0.0592	pCi/L	0.39	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	95.9		40 - 110							

## Method: 9320 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-307239/1-A**  
**Matrix: Water**  
**Analysis Batch: 309197**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 307239**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3084	U	0.216	0.218	1.00	0.337	pCi/L	05/04/17 11:11	05/18/17 13:33	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/04/17 11:11	05/18/17 13:33	1
Y Carrier	88.6		40 - 110					05/04/17 11:11	05/18/17 13:33	1

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-2  
SDG: Ash Pond

## Method: 9320 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-307239/2-A**  
**Matrix: Water**  
**Analysis Batch: 309197**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 307239**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.4	13.69		1.45	1.00	0.304	pCi/L	102	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	101		40 - 110
Y Carrier	91.6		40 - 110

**Lab Sample ID: 400-137038-1 DU**  
**Matrix: Water**  
**Analysis Batch: 309197**

**Client Sample ID: WGWA-18**  
**Prep Type: Total/NA**  
**Prep Batch: 307239**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	-0.0211	U	0.1302	U	0.210	1.00	0.355	pCi/L	0.37	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	95.9		40 - 110
Y Carrier	84.5		40 - 110

## Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

**Lab Sample ID: 400-137038-1 DU**  
**Matrix: Water**  
**Analysis Batch: 310927**

**Client Sample ID: WGWA-18**  
**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	0.109	U	0.2143	U	0.217	5.00	0.355	pCi/L	0.25	

**TestAmerica Pensacola**  
 3355 McLemore Drive  
 Pensacola, FL 32514  
 Phone (850) 474-1001 Fax (850) 478-2671

**Chain of Custody Record**

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING

Lab PM: Whitmire, Cheyenne R  
 Camer Tracking No(s):  
 Client Information  
 T. Payne TP, T. Thomas TT, M. Burch HF  
 Southern Company  
 241 Ralph McGill Blvd SE B10185  
 Atlanta, GA 30308  
 PO # 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

Due Date Requested:  
 TAT Requested (days):  
 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  
 Z - other (specify)

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Organism, etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TDS - SM 2540C: Cl, F, SO4 - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320	Analysis Requested	Total Number of Containers	Special Instructions/Note:
WGWA-18	4/25/17	1010	G	W	X	X	X	X	X		4	Level IV Data Package Required. Extra radium sample collected for lab QA/QC
WGWA-4	4/25/17	1030	G	W	X	X	X	X	X		3	Level IV Data Package Required
WGWA-3	4/25/17	1135	G	W	X	X	X	X	X		3	Level IV Data Package Required
WGWA-5	4/25/17	1220	G	W	X	X	X	X	X		3	Level IV Data Package Required
WGWA-6	4/25/17	1400	G	W	X	X	X	X	X		3	Level IV Data Package Required
WGWA-7	4/25/17	1400	G	W	X	X	X	X	X		3	Level IV Data Package Required
WGWC-16	4/25/17	1420	G	W	X	X	X	X	X		3	Level IV Data Package Required
WGWC-15	4/25/17	1533	G	W	X	X	X	X	X		3	Level IV Data Package Required
WGWC-17	4/25/17	1610	G	W	X	X	X	X	X		3	Level IV Data Package Required
FERB-1	4/25/17	1030	G	W	X	X	X	X	X		3	Level IV Data Package Required
FB-1	4/25/17	1135	G	W	X	X	X	X	X		3	Level IV Data Package Required
DUP-1	4/25/17	--	G	W	X	X	X	X	X		3	Level IV Data Package Required

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months  
 Special Instructions/QC Requirements:  
 Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: 4/26/17 - 1235 Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: 4/26/17 1600 Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Custody Seals Intact: \_\_\_\_\_  
 Δ Yes Δ No  
 Cooler Temperature(s) °C and Other Remarks: 2-8, 2.0, 2.2

681-Atlanta



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-137038-2

SDG Number: Ash Pond

**Login Number: 137038**

**List Number: 1**

**Creator: Siddoway, Benjamin**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8°C, 2.2°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 Wansley

TestAmerica Job ID: 400-137038-2  
SDG: Ash Pond

## Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	06-30-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17 *
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	03-31-19
Florida	NELAP	4	E87689	06-30-17 *
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17 *
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17 *
Nevada	State Program	9	MO000542017-1	07-31-17 *
New Jersey	NELAP	2	MO002	06-30-17 *
New York	NELAP	2	11616	03-31-18

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Pensacola

# Accreditation/Certification Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137038-2  
SDG: Ash Pond

## 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	06-14-17 *
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: 400-137162-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR - Plant Wansley

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

5/17/2017 10:33:38 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

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[www.testamericainc.com](http://www.testamericainc.com)

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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 Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

**Job ID: 400-137162-1**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-137162-1

#### HPLC/IC

Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: WGWC-8 (400-137162-8). Elevated reporting limits (RLs) are provided.

#### Metals

Method(s) 6020: The method blank for preparation batch 352819 and analytical batch 353042 contained Arsenic 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) 6020: The serial dilution performed for the following sample associated with batch 353184 was outside control limits: (400-137193-J-12-A SD)



# Detection Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

## Client Sample ID: WGWA-1

## Lab Sample ID: 400-137162-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.4		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.039		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.1		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	10		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-2

## Lab Sample ID: 400-137162-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.2		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.75	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.019		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	12		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0014	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0049	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	94		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-11

## Lab Sample ID: 400-137162-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.1		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	2.2		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.030		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	4.0		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	0.0010	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	42		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-13

## Lab Sample ID: 400-137162-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.3		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.33		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	8.1		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.054		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	6.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Molybdenum	0.0019	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

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

## Client Sample ID: WGWA-14A

## Lab Sample ID: 400-137162-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.8		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	20		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0019	B	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.042		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.010		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	76		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-10

## Lab Sample ID: 400-137162-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.3		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.17	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	2.5		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.039		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	8.1		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	0.0014	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.011		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

## Client Sample ID: WGWC-12

## Lab Sample ID: 400-137162-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.2		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	15		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.0040		0.00050	0.000098	mg/L	1		6020	Total Recoverable
Calcium	3.0		0.050	0.025	mg/L	1		6020	Total Recoverable
Cobalt	0.00026	J	0.00050	0.000080	mg/L	1		6020	Total Recoverable
Lithium	0.0011		0.0010	0.00064	mg/L	1		6020	Total Recoverable
Total Dissolved Solids	100		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-8

## Lab Sample ID: 400-137162-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	42		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.31		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	180		5.0	3.5	mg/L	5		300.0	Total/NA
Barium	0.00098	J	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 Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

## Client Sample ID: WGWC-8 (Continued)

## Lab Sample ID: 400-137162-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Beryllium	0.0017	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Boron	2.0		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	39		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0091		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.0032		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	380		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-9

## Lab Sample ID: 400-137162-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.2		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	1.5		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	37		1.0	0.70	mg/L	1		300.0	Total/NA
Boron	0.38		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	7.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.029		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0040	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0019		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	140		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-19

## Lab Sample ID: 400-137162-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.3		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.40		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	3.3		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.0014	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	8.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.044		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	76		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FB-2

## Lab Sample ID: 400-137162-11

No Detections.

## Client Sample ID: FERB-2

## Lab Sample ID: 400-137162-12

No Detections.

## Client Sample ID: DUP-2

## Lab Sample ID: 400-137162-13

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
 SDG: Ash Pond

**Client Sample ID: DUP-2 (Continued)**

**Lab Sample ID: 400-137162-13**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.44		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	3.4		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.0014	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	8.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.044		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	94		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola



# Method Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN

#### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-137162-1	WGWA-1	Water	04/24/17 15:45	04/27/17 09:15
400-137162-2	WGWA-2	Water	04/24/17 16:05	04/27/17 09:15
400-137162-3	WGWC-11	Water	04/26/17 09:55	04/28/17 09:13
400-137162-4	WGWC-13	Water	04/26/17 10:15	04/28/17 09:13
400-137162-5	WGWA-14A	Water	04/26/17 12:00	04/28/17 09:13
400-137162-6	WGWC-10	Water	04/26/17 12:16	04/28/17 09:13
400-137162-7	WGWC-12	Water	04/26/17 13:35	04/28/17 09:13
400-137162-8	WGWC-8	Water	04/26/17 14:19	04/28/17 09:13
400-137162-9	WGWC-9	Water	04/26/17 14:20	04/28/17 09:13
400-137162-10	WGWC-19	Water	04/26/17 14:42	04/28/17 09:13
400-137162-11	FB-2	Water	04/26/17 10:10	04/28/17 09:13
400-137162-12	FERB-2	Water	04/26/17 12:40	04/28/17 09:13
400-137162-13	DUP-2	Water	04/26/17 00:00	04/28/17 09:13

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

**Client Sample ID: WGWA-1**

**Lab Sample ID: 400-137162-1**

**Date Collected: 04/24/17 15:45**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.4</b>		1.0	0.89	mg/L			04/30/17 16:19	1
Fluoride	<0.082		0.20	0.082	mg/L			04/30/17 16:19	1
Sulfate	<0.70		1.0	0.70	mg/L			04/30/17 16:19	1

### 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		05/08/17 16:18	05/10/17 00:51	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/08/17 16:18	05/10/17 00:51	5
<b>Barium</b>	<b>0.039</b>		0.0025	0.00049	mg/L		05/08/17 16:18	05/10/17 00:51	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 00:51	5
Boron	<0.021		0.050	0.021	mg/L		05/08/17 16:18	05/10/17 00:51	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 00:51	5
<b>Calcium</b>	<b>1.1</b>		0.25	0.13	mg/L		05/08/17 16:18	05/10/17 00:51	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/08/17 16:18	05/10/17 00:51	5
<b>Cobalt</b>	<b>0.0010</b>	<b>J</b>	0.0025	0.00040	mg/L		05/08/17 16:18	05/10/17 00:51	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:18	05/10/17 00:51	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/08/17 16:18	05/10/17 00:51	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/08/17 16:18	05/10/17 00:51	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/08/17 16:18	05/10/17 00:51	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/08/17 16:18	05/10/17 00:51	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		05/06/17 13:31	05/08/17 13:37	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>10</b>		5.0	3.4	mg/L			04/29/17 14:20	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

**Client Sample ID: WGWA-2**

**Lab Sample ID: 400-137162-2**

**Date Collected: 04/24/17 16:05**

**Matrix: Water**

**Date Received: 04/27/17 09:15**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>2.2</b>		1.0	0.89	mg/L			04/30/17 17:05	1
Fluoride	<0.082		0.20	0.082	mg/L			04/30/17 17:05	1
<b>Sulfate</b>	<b>0.75</b>	<b>J</b>	1.0	0.70	mg/L			04/30/17 17:05	1

### 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		05/08/17 16:18	05/10/17 00:55	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/08/17 16:18	05/10/17 00:55	5
<b>Barium</b>	<b>0.019</b>		0.0025	0.00049	mg/L		05/08/17 16:18	05/10/17 00:55	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 00:55	5
Boron	<0.021		0.050	0.021	mg/L		05/08/17 16:18	05/10/17 00:55	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 00:55	5
<b>Calcium</b>	<b>12</b>		0.25	0.13	mg/L		05/08/17 16:18	05/10/17 00:55	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/08/17 16:18	05/10/17 00:55	5
<b>Cobalt</b>	<b>0.0014</b>	<b>J</b>	0.0025	0.00040	mg/L		05/08/17 16:18	05/10/17 00:55	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:18	05/10/17 00:55	5
<b>Lithium</b>	<b>0.0049</b>	<b>J</b>	0.0050	0.0032	mg/L		05/08/17 16:18	05/10/17 00:55	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/08/17 16:18	05/10/17 00:55	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/08/17 16:18	05/10/17 00:55	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/08/17 16:18	05/10/17 00:55	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		05/06/17 13:31	05/08/17 14:00	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>94</b>		5.0	3.4	mg/L			04/29/17 14:20	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-137162-3**

**Date Collected: 04/26/17 09:55**

**Matrix: Water**

**Date Received: 04/28/17 09:13**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.1</b>		1.0	0.89	mg/L			04/30/17 17:28	1
Fluoride	<0.082		0.20	0.082	mg/L			04/30/17 17:28	1
<b>Sulfate</b>	<b>2.2</b>		1.0	0.70	mg/L			04/30/17 17:28	1

### 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		05/08/17 16:18	05/10/17 01:00	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/08/17 16:18	05/10/17 01:00	5
<b>Barium</b>	<b>0.030</b>		0.0025	0.00049	mg/L		05/08/17 16:18	05/10/17 01:00	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 01:00	5
Boron	<0.021		0.050	0.021	mg/L		05/08/17 16:18	05/10/17 01:00	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 01:00	5
<b>Calcium</b>	<b>4.0</b>		0.25	0.13	mg/L		05/08/17 16:18	05/10/17 01:00	5
<b>Chromium</b>	<b>0.0011</b>	<b>J</b>	0.0025	0.0011	mg/L		05/08/17 16:18	05/10/17 01:00	5
<b>Cobalt</b>	<b>0.0010</b>	<b>J</b>	0.0025	0.00040	mg/L		05/08/17 16:18	05/10/17 01:00	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:18	05/10/17 01:00	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/08/17 16:18	05/10/17 01:00	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/08/17 16:18	05/10/17 01:00	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/08/17 16:18	05/10/17 01:00	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/08/17 16:18	05/10/17 01:00	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		05/06/17 13:31	05/08/17 14:02	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>42</b>		5.0	3.4	mg/L			05/02/17 17:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

**Client Sample ID: WGWC-13**

**Date Collected: 04/26/17 10:15**

**Date Received: 04/28/17 09:13**

**Lab Sample ID: 400-137162-4**

**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.3		1.0	0.89	mg/L			04/30/17 17:51	1
Fluoride	0.33		0.20	0.082	mg/L			04/30/17 17:51	1
Sulfate	8.1		1.0	0.70	mg/L			04/30/17 17:51	1

**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		05/08/17 16:18	05/10/17 01:04	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/08/17 16:18	05/10/17 01:04	5
Barium	0.054		0.0025	0.00049	mg/L		05/08/17 16:18	05/10/17 01:04	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 01:04	5
Boron	<0.021		0.050	0.021	mg/L		05/08/17 16:18	05/10/17 01:04	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 01:04	5
Calcium	6.5		0.25	0.13	mg/L		05/08/17 16:18	05/10/17 01:04	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/08/17 16:18	05/10/17 01:04	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/08/17 16:18	05/10/17 01:04	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:18	05/10/17 01:04	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/08/17 16:18	05/10/17 01:04	5
Molybdenum	0.0019	J	0.015	0.00085	mg/L		05/08/17 16:18	05/10/17 01:04	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/08/17 16:18	05/10/17 01:04	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/08/17 16:18	05/10/17 01:04	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		05/06/17 13:31	05/08/17 14:04	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	92		5.0	3.4	mg/L			05/02/17 17:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

**Client Sample ID: WGWA-14A**

**Lab Sample ID: 400-137162-5**

**Date Collected: 04/26/17 12:00**

**Matrix: Water**

**Date Received: 04/28/17 09:13**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>4.8</b>		1.0	0.89	mg/L			04/30/17 18:59	1
Fluoride	<0.082		0.20	0.082	mg/L			04/30/17 18:59	1
<b>Sulfate</b>	<b>20</b>		1.0	0.70	mg/L			04/30/17 18:59	1

### 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		05/08/17 16:18	05/10/17 01:27	5
<b>Arsenic</b>	<b>0.0019</b>	<b>B</b>	0.0013	0.00046	mg/L		05/08/17 16:18	05/10/17 01:27	5
<b>Barium</b>	<b>0.042</b>		0.0025	0.00049	mg/L		05/08/17 16:18	05/10/17 01:27	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 01:27	5
Boron	<0.021		0.050	0.021	mg/L		05/08/17 16:18	05/10/17 01:27	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 01:27	5
<b>Calcium</b>	<b>2.5</b>		0.25	0.13	mg/L		05/08/17 16:18	05/10/17 01:27	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/08/17 16:18	05/10/17 01:27	5
<b>Cobalt</b>	<b>0.010</b>		0.0025	0.00040	mg/L		05/08/17 16:18	05/10/17 01:27	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:18	05/10/17 01:27	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/08/17 16:18	05/10/17 01:27	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/08/17 16:18	05/10/17 01:27	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/08/17 16:18	05/10/17 01:27	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/08/17 16:18	05/10/17 01:27	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		05/06/17 13:31	05/08/17 14:05	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>76</b>		5.0	3.4	mg/L			05/02/17 17:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

**Client Sample ID: WGWC-10**

**Date Collected: 04/26/17 12:16**

**Date Received: 04/28/17 09:13**

**Lab Sample ID: 400-137162-6**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.3		1.0	0.89	mg/L			04/30/17 19:22	1
Fluoride	0.17	J	0.20	0.082	mg/L			04/30/17 19:22	1
Sulfate	2.5		1.0	0.70	mg/L			04/30/17 19:22	1

### 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		05/08/17 16:18	05/10/17 01:31	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/08/17 16:18	05/10/17 01:31	5
Barium	0.039		0.0025	0.00049	mg/L		05/08/17 16:18	05/10/17 01:31	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 01:31	5
Boron	<0.021		0.050	0.021	mg/L		05/08/17 16:18	05/10/17 01:31	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 01:31	5
Calcium	8.1		0.25	0.13	mg/L		05/08/17 16:18	05/10/17 01:31	5
Chromium	0.0013	J	0.0025	0.0011	mg/L		05/08/17 16:18	05/10/17 01:31	5
Cobalt	0.0014	J	0.0025	0.00040	mg/L		05/08/17 16:18	05/10/17 01:31	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:18	05/10/17 01:31	5
Lithium	0.011		0.0050	0.0032	mg/L		05/08/17 16:18	05/10/17 01:31	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/08/17 16:18	05/10/17 01:31	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/08/17 16:18	05/10/17 01:31	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/08/17 16:18	05/10/17 01:31	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		05/06/17 13:31	05/08/17 14:07	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	48		5.0	3.4	mg/L			05/02/17 17:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-137162-7**

**Date Collected: 04/26/17 13:35**

**Matrix: Water**

**Date Received: 04/28/17 09:13**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.2</b>		1.0	0.89	mg/L			04/30/17 19:45	1
Fluoride	<0.082		0.20	0.082	mg/L			04/30/17 19:45	1
<b>Sulfate</b>	<b>15</b>		1.0	0.70	mg/L			04/30/17 19:45	1

### Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00020		0.00050	0.00020	mg/L		05/09/17 15:33	05/10/17 14:46	1
Arsenic	<0.000092		0.00025	0.000092	mg/L		05/09/17 15:33	05/10/17 14:46	1
<b>Barium</b>	<b>0.0040</b>		0.00050	0.000098	mg/L		05/09/17 15:33	05/10/17 14:46	1
Beryllium	<0.000068		0.00050	0.000068	mg/L		05/09/17 15:33	05/10/17 14:46	1
Boron	<0.0042		0.010	0.0042	mg/L		05/09/17 15:33	05/10/17 14:46	1
Cadmium	<0.000068		0.00050	0.000068	mg/L		05/09/17 15:33	05/10/17 14:46	1
<b>Calcium</b>	<b>3.0</b>		0.050	0.025	mg/L		05/09/17 15:33	05/10/17 14:46	1
Chromium	<0.00022		0.00050	0.00022	mg/L		05/09/17 15:33	05/10/17 14:46	1
<b>Cobalt</b>	<b>0.00026</b>	<b>J</b>	0.00050	0.000080	mg/L		05/09/17 15:33	05/10/17 14:46	1
Lead	<0.000070		0.00025	0.000070	mg/L		05/09/17 15:33	05/10/17 14:46	1
<b>Lithium</b>	<b>0.0011</b>		0.0010	0.00064	mg/L		05/09/17 15:33	05/10/17 14:46	1
Molybdenum	<0.00017		0.0030	0.00017	mg/L		05/09/17 15:33	05/10/17 14:46	1
Selenium	<0.000048		0.00025	0.000048	mg/L		05/09/17 15:33	05/10/17 14:46	1
Thallium	<0.000017		0.00010	0.000017	mg/L		05/09/17 15:33	05/10/17 14:46	1

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/17 13:31	05/08/17 14:09	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>100</b>		5.0	3.4	mg/L			05/02/17 17:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-137162-8**

**Date Collected: 04/26/17 14:19**

**Matrix: Water**

**Date Received: 04/28/17 09:13**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	42		1.0	0.89	mg/L			04/30/17 20:08	1
Fluoride	0.31		0.20	0.082	mg/L			04/30/17 20:08	1
Sulfate	180		5.0	3.5	mg/L			05/03/17 14:42	5

### 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		05/08/17 16:18	05/10/17 01:36	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/08/17 16:18	05/10/17 01:36	5
Barium	0.00098	J	0.0025	0.00049	mg/L		05/08/17 16:18	05/10/17 01:36	5
Beryllium	0.0017	J	0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 01:36	5
Boron	2.0		0.050	0.021	mg/L		05/08/17 16:18	05/10/17 01:36	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 01:36	5
Calcium	39		0.25	0.13	mg/L		05/08/17 16:18	05/10/17 01:36	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/08/17 16:18	05/10/17 01:36	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/08/17 16:18	05/10/17 01:36	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:18	05/10/17 01:36	5
Lithium	0.0091		0.0050	0.0032	mg/L		05/08/17 16:18	05/10/17 01:36	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/08/17 16:18	05/10/17 01:36	5
Selenium	0.0032		0.0013	0.00024	mg/L		05/08/17 16:18	05/10/17 01:36	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/08/17 16:18	05/10/17 01:36	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		05/06/17 13:31	05/08/17 14:11	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	380		5.0	3.4	mg/L			05/02/17 17:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-137162-9**

**Date Collected: 04/26/17 14:20**

**Matrix: Water**

**Date Received: 04/28/17 09:13**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.2		1.0	0.89	mg/L			04/30/17 20:30	1
Fluoride	1.5		0.20	0.082	mg/L			04/30/17 20:30	1
Sulfate	37		1.0	0.70	mg/L			04/30/17 20:30	1

### 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		05/08/17 16:18	05/10/17 01:40	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/08/17 16:18	05/10/17 01:40	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/08/17 16:18	05/10/17 01:40	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 01:40	5
Boron	0.38		0.050	0.021	mg/L		05/08/17 16:18	05/10/17 01:40	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 01:40	5
Calcium	7.1		0.25	0.13	mg/L		05/08/17 16:18	05/10/17 01:40	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/08/17 16:18	05/10/17 01:40	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/08/17 16:18	05/10/17 01:40	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:18	05/10/17 01:40	5
Lithium	0.029		0.0050	0.0032	mg/L		05/08/17 16:18	05/10/17 01:40	5
Molybdenum	0.0040	J	0.015	0.00085	mg/L		05/08/17 16:18	05/10/17 01:40	5
Selenium	0.0019		0.0013	0.00024	mg/L		05/08/17 16:18	05/10/17 01:40	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/08/17 16:18	05/10/17 01:40	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		05/06/17 13:31	05/08/17 14:12	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	140		5.0	3.4	mg/L			05/02/17 17:02	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-137162-10**

Date Collected: 04/26/17 14:42

Matrix: Water

Date Received: 04/28/17 09:13

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.3		1.0	0.89	mg/L			04/30/17 20:53	1
Fluoride	0.40		0.20	0.082	mg/L			04/30/17 20:53	1
Sulfate	3.3		1.0	0.70	mg/L			04/30/17 20:53	1

### 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		05/08/17 16:18	05/10/17 01:45	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/08/17 16:18	05/10/17 01:45	5
Barium	0.0014	J	0.0025	0.00049	mg/L		05/08/17 16:18	05/10/17 01:45	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 01:45	5
Boron	<0.021		0.050	0.021	mg/L		05/08/17 16:18	05/10/17 01:45	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 01:45	5
Calcium	8.4		0.25	0.13	mg/L		05/08/17 16:18	05/10/17 01:45	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/08/17 16:18	05/10/17 01:45	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/08/17 16:18	05/10/17 01:45	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:18	05/10/17 01:45	5
Lithium	0.044		0.0050	0.0032	mg/L		05/08/17 16:18	05/10/17 01:45	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/08/17 16:18	05/10/17 01:45	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/08/17 16:18	05/10/17 01:45	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/08/17 16:18	05/10/17 01:45	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		05/06/17 13:31	05/08/17 14:14	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	76		5.0	3.4	mg/L			05/02/17 17:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

**Client Sample ID: FB-2**  
**Date Collected: 04/26/17 10:10**  
**Date Received: 04/28/17 09:13**

**Lab Sample ID: 400-137162-11**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			05/02/17 00:04	1
Fluoride	<0.082		0.20	0.082	mg/L			05/02/17 00:04	1
Sulfate	<0.70		1.0	0.70	mg/L			05/02/17 00:04	1

### 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		05/08/17 16:18	05/10/17 01:49	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/08/17 16:18	05/10/17 01:49	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/08/17 16:18	05/10/17 01:49	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 01:49	5
Boron	<0.021		0.050	0.021	mg/L		05/08/17 16:18	05/10/17 01:49	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 01:49	5
Calcium	<0.13		0.25	0.13	mg/L		05/08/17 16:18	05/10/17 01:49	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/08/17 16:18	05/10/17 01:49	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/08/17 16:18	05/10/17 01:49	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:18	05/10/17 01:49	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/08/17 16:18	05/10/17 01:49	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/08/17 16:18	05/10/17 01:49	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/08/17 16:18	05/10/17 01:49	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/08/17 16:18	05/10/17 01:49	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		05/06/17 13:31	05/08/17 14:25	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			05/02/17 17:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

**Client Sample ID: FERB-2**

**Date Collected: 04/26/17 12:40**

**Date Received: 04/28/17 09:13**

**Lab Sample ID: 400-137162-12**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			05/02/17 00:27	1
Fluoride	<0.082		0.20	0.082	mg/L			05/02/17 00:27	1
Sulfate	<0.70		1.0	0.70	mg/L			05/02/17 00:27	1

### 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		05/08/17 16:18	05/10/17 01:53	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/08/17 16:18	05/10/17 01:53	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/08/17 16:18	05/10/17 01:53	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 01:53	5
Boron	<0.021		0.050	0.021	mg/L		05/08/17 16:18	05/10/17 01:53	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 01:53	5
Calcium	<0.13		0.25	0.13	mg/L		05/08/17 16:18	05/10/17 01:53	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/08/17 16:18	05/10/17 01:53	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/08/17 16:18	05/10/17 01:53	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:18	05/10/17 01:53	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/08/17 16:18	05/10/17 01:53	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/08/17 16:18	05/10/17 01:53	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/08/17 16:18	05/10/17 01:53	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/08/17 16:18	05/10/17 01:53	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		05/06/17 13:31	05/08/17 14:27	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			05/02/17 17:02	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

**Client Sample ID: DUP-2**

**Date Collected: 04/26/17 00:00**

**Date Received: 04/28/17 09:13**

**Lab Sample ID: 400-137162-13**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.4		1.0	0.89	mg/L			05/02/17 00:50	1
Fluoride	0.44		0.20	0.082	mg/L			05/02/17 00:50	1
Sulfate	3.4		1.0	0.70	mg/L			05/02/17 00:50	1

### 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		05/08/17 16:18	05/10/17 01:58	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/08/17 16:18	05/10/17 01:58	5
Barium	0.0014	J	0.0025	0.00049	mg/L		05/08/17 16:18	05/10/17 01:58	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 01:58	5
Boron	<0.021		0.050	0.021	mg/L		05/08/17 16:18	05/10/17 01:58	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/10/17 01:58	5
Calcium	8.4		0.25	0.13	mg/L		05/08/17 16:18	05/10/17 01:58	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/08/17 16:18	05/10/17 01:58	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/08/17 16:18	05/10/17 01:58	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:18	05/10/17 01:58	5
Lithium	0.044		0.0050	0.0032	mg/L		05/08/17 16:18	05/10/17 01:58	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/08/17 16:18	05/10/17 01:58	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/08/17 16:18	05/10/17 01:58	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/08/17 16:18	05/10/17 01:58	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		05/06/17 13:31	05/08/17 14:29	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	94		5.0	3.4	mg/L			04/29/17 15:11	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

## Qualifiers

### HPLC/IC

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.
E	Result exceeded calibration range.

### 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.
B	Compound was found in the blank and sample.

## 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 Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

**Client Sample ID: WGWA-1**  
**Date Collected: 04/24/17 15:45**  
**Date Received: 04/27/17 09:15**

**Lab Sample ID: 400-137162-1**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351884	04/30/17 16:19	KH1	TAL PEN
Total Recoverable	Prep	3005A			352819	05/08/17 16:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353042	05/10/17 00:51	DRE	TAL PEN
Total/NA	Prep	7470A			352392	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352802	05/08/17 13:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351821	04/29/17 14:20	TET	TAL PEN

**Client Sample ID: WGWA-2**  
**Date Collected: 04/24/17 16:05**  
**Date Received: 04/27/17 09:15**

**Lab Sample ID: 400-137162-2**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351884	04/30/17 17:05	KH1	TAL PEN
Total Recoverable	Prep	3005A			352819	05/08/17 16:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353042	05/10/17 00:55	DRE	TAL PEN
Total/NA	Prep	7470A			352392	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352802	05/08/17 14:00	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351821	04/29/17 14:20	TET	TAL PEN

**Client Sample ID: WGWC-11**  
**Date Collected: 04/26/17 09:55**  
**Date Received: 04/28/17 09:13**

**Lab Sample ID: 400-137162-3**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351884	04/30/17 17:28	KH1	TAL PEN
Total Recoverable	Prep	3005A			352819	05/08/17 16:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353042	05/10/17 01:00	DRE	TAL PEN
Total/NA	Prep	7470A			352392	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352802	05/08/17 14:02	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	352058	05/02/17 17:02	TET	TAL PEN

**Client Sample ID: WGWC-13**  
**Date Collected: 04/26/17 10:15**  
**Date Received: 04/28/17 09:13**

**Lab Sample ID: 400-137162-4**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351884	04/30/17 17:51	KH1	TAL PEN
Total Recoverable	Prep	3005A			352819	05/08/17 16:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353042	05/10/17 01:04	DRE	TAL PEN
Total/NA	Prep	7470A			352392	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352802	05/08/17 14:04	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	352058	05/02/17 17:02	TET	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

**Client Sample ID: WGWA-14A**

**Lab Sample ID: 400-137162-5**

**Date Collected: 04/26/17 12:00**

**Matrix: Water**

**Date Received: 04/28/17 09:13**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351884	04/30/17 18:59	KH1	TAL PEN
Total Recoverable	Prep	3005A			352819	05/08/17 16:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353042	05/10/17 01:27	DRE	TAL PEN
Total/NA	Prep	7470A			352392	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352802	05/08/17 14:05	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	352058	05/02/17 17:02	TET	TAL PEN

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-137162-6**

**Date Collected: 04/26/17 12:16**

**Matrix: Water**

**Date Received: 04/28/17 09:13**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351884	04/30/17 19:22	KH1	TAL PEN
Total Recoverable	Prep	3005A			352819	05/08/17 16:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353042	05/10/17 01:31	DRE	TAL PEN
Total/NA	Prep	7470A			352392	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352802	05/08/17 14:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	352058	05/02/17 17:02	TET	TAL PEN

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-137162-7**

**Date Collected: 04/26/17 13:35**

**Matrix: Water**

**Date Received: 04/28/17 09:13**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351884	04/30/17 19:45	KH1	TAL PEN
Total Recoverable	Prep	3005A			352959	05/09/17 15:33	DRE	TAL PEN
Total Recoverable	Analysis	6020		1	353184	05/10/17 14:46	DRE	TAL PEN
Total/NA	Prep	7470A			352392	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352802	05/08/17 14:09	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	352058	05/02/17 17:02	TET	TAL PEN

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-137162-8**

**Date Collected: 04/26/17 14:19**

**Matrix: Water**

**Date Received: 04/28/17 09:13**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351884	04/30/17 20:08	KH1	TAL PEN
Total/NA	Analysis	300.0		5	352273	05/03/17 14:42	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352819	05/08/17 16:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353042	05/10/17 01:36	DRE	TAL PEN
Total/NA	Prep	7470A			352392	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352802	05/08/17 14:11	JAP	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-137162-8**

**Date Collected: 04/26/17 14:19**

**Matrix: Water**

**Date Received: 04/28/17 09:13**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	352058	05/02/17 17:02	TET	TAL PEN

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-137162-9**

**Date Collected: 04/26/17 14:20**

**Matrix: Water**

**Date Received: 04/28/17 09:13**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351884	04/30/17 20:30	KH1	TAL PEN
Total Recoverable	Prep	3005A			352819	05/08/17 16:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353042	05/10/17 01:40	DRE	TAL PEN
Total/NA	Prep	7470A			352392	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352802	05/08/17 14:12	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	352058	05/02/17 17:02	TET	TAL PEN

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-137162-10**

**Date Collected: 04/26/17 14:42**

**Matrix: Water**

**Date Received: 04/28/17 09:13**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351884	04/30/17 20:53	KH1	TAL PEN
Total Recoverable	Prep	3005A			352819	05/08/17 16:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353042	05/10/17 01:45	DRE	TAL PEN
Total/NA	Prep	7470A			352392	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352802	05/08/17 14:14	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	352058	05/02/17 17:02	TET	TAL PEN

**Client Sample ID: FB-2**

**Lab Sample ID: 400-137162-11**

**Date Collected: 04/26/17 10:10**

**Matrix: Water**

**Date Received: 04/28/17 09:13**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351964	05/02/17 00:04	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352819	05/08/17 16:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353042	05/10/17 01:49	DRE	TAL PEN
Total/NA	Prep	7470A			352392	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352802	05/08/17 14:25	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	352058	05/02/17 17:02	TET	TAL PEN



# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

**Client Sample ID: FERB-2**

**Lab Sample ID: 400-137162-12**

**Date Collected: 04/26/17 12:40**

**Matrix: Water**

**Date Received: 04/28/17 09:13**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351964	05/02/17 00:27	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352819	05/08/17 16:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353042	05/10/17 01:53	DRE	TAL PEN
Total/NA	Prep	7470A			352392	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352802	05/08/17 14:27	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	352058	05/02/17 17:02	TET	TAL PEN

**Client Sample ID: DUP-2**

**Lab Sample ID: 400-137162-13**

**Date Collected: 04/26/17 00:00**

**Matrix: Water**

**Date Received: 04/28/17 09:13**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351964	05/02/17 00:50	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352819	05/08/17 16:18	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353042	05/10/17 01:58	DRE	TAL PEN
Total/NA	Prep	7470A			352392	05/06/17 13:31	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352802	05/08/17 14:29	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351822	04/29/17 15:11	TET	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 Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

## HPLC/IC

### Analysis Batch: 351884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137162-1	WGWA-1	Total/NA	Water	300.0	
400-137162-2	WGWA-2	Total/NA	Water	300.0	
400-137162-3	WGWC-11	Total/NA	Water	300.0	
400-137162-4	WGWC-13	Total/NA	Water	300.0	
400-137162-5	WGWA-14A	Total/NA	Water	300.0	
400-137162-6	WGWC-10	Total/NA	Water	300.0	
400-137162-7	WGWC-12	Total/NA	Water	300.0	
400-137162-8	WGWC-8	Total/NA	Water	300.0	
400-137162-9	WGWC-9	Total/NA	Water	300.0	
400-137162-10	WGWC-19	Total/NA	Water	300.0	
MB 400-351884/4	Method Blank	Total/NA	Water	300.0	
LCS 400-351884/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-351884/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-137236-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
400-137236-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 351964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137162-11	FB-2	Total/NA	Water	300.0	
400-137162-12	FERB-2	Total/NA	Water	300.0	
400-137162-13	DUP-2	Total/NA	Water	300.0	
MB 400-351964/4	Method Blank	Total/NA	Water	300.0	
LCS 400-351964/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-351964/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-137193-G-12 MS	Matrix Spike	Total/NA	Water	300.0	
400-137193-G-12 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 352273

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137162-8	WGWC-8	Total/NA	Water	300.0	
MB 400-352273/4	Method Blank	Total/NA	Water	300.0	
LCS 400-352273/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-352273/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-137343-E-1 MS	Matrix Spike	Total/NA	Water	300.0	
400-137343-E-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

## Metals

### Prep Batch: 352392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137162-1	WGWA-1	Total/NA	Water	7470A	
400-137162-2	WGWA-2	Total/NA	Water	7470A	
400-137162-3	WGWC-11	Total/NA	Water	7470A	
400-137162-4	WGWC-13	Total/NA	Water	7470A	
400-137162-5	WGWA-14A	Total/NA	Water	7470A	
400-137162-6	WGWC-10	Total/NA	Water	7470A	
400-137162-7	WGWC-12	Total/NA	Water	7470A	
400-137162-8	WGWC-8	Total/NA	Water	7470A	
400-137162-9	WGWC-9	Total/NA	Water	7470A	
400-137162-10	WGWC-19	Total/NA	Water	7470A	

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

## Metals (Continued)

### Prep Batch: 352392 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137162-11	FB-2	Total/NA	Water	7470A	
400-137162-12	FERB-2	Total/NA	Water	7470A	
400-137162-13	DUP-2	Total/NA	Water	7470A	
MB 400-352392/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-352392/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-137162-1 MS	WGWA-1	Total/NA	Water	7470A	
400-137162-1 MSD	WGWA-1	Total/NA	Water	7470A	

### Analysis Batch: 352802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137162-1	WGWA-1	Total/NA	Water	7470A	352392
400-137162-2	WGWA-2	Total/NA	Water	7470A	352392
400-137162-3	WGWC-11	Total/NA	Water	7470A	352392
400-137162-4	WGWC-13	Total/NA	Water	7470A	352392
400-137162-5	WGWA-14A	Total/NA	Water	7470A	352392
400-137162-6	WGWC-10	Total/NA	Water	7470A	352392
400-137162-7	WGWC-12	Total/NA	Water	7470A	352392
400-137162-8	WGWC-8	Total/NA	Water	7470A	352392
400-137162-9	WGWC-9	Total/NA	Water	7470A	352392
400-137162-10	WGWC-19	Total/NA	Water	7470A	352392
400-137162-11	FB-2	Total/NA	Water	7470A	352392
400-137162-12	FERB-2	Total/NA	Water	7470A	352392
400-137162-13	DUP-2	Total/NA	Water	7470A	352392
MB 400-352392/14-A	Method Blank	Total/NA	Water	7470A	352392
LCS 400-352392/15-A	Lab Control Sample	Total/NA	Water	7470A	352392
400-137162-1 MS	WGWA-1	Total/NA	Water	7470A	352392
400-137162-1 MSD	WGWA-1	Total/NA	Water	7470A	352392

### Prep Batch: 352819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137162-1	WGWA-1	Total Recoverable	Water	3005A	
400-137162-2	WGWA-2	Total Recoverable	Water	3005A	
400-137162-3	WGWC-11	Total Recoverable	Water	3005A	
400-137162-4	WGWC-13	Total Recoverable	Water	3005A	
400-137162-5	WGWA-14A	Total Recoverable	Water	3005A	
400-137162-6	WGWC-10	Total Recoverable	Water	3005A	
400-137162-8	WGWC-8	Total Recoverable	Water	3005A	
400-137162-9	WGWC-9	Total Recoverable	Water	3005A	
400-137162-10	WGWC-19	Total Recoverable	Water	3005A	
400-137162-11	FB-2	Total Recoverable	Water	3005A	
400-137162-12	FERB-2	Total Recoverable	Water	3005A	
400-137162-13	DUP-2	Total Recoverable	Water	3005A	
MB 400-352819/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-352819/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-137108-A-9-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-137108-A-9-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Prep Batch: 352959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137162-7	WGWC-12	Total Recoverable	Water	3005A	
MB 400-352959/1-A ^5	Method Blank	Total Recoverable	Water	3005A	

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

## Metals (Continued)

### Prep Batch: 352959 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-352959/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

### Analysis Batch: 353042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137162-1	WGWA-1	Total Recoverable	Water	6020	352819
400-137162-2	WGWA-2	Total Recoverable	Water	6020	352819
400-137162-3	WGWC-11	Total Recoverable	Water	6020	352819
400-137162-4	WGWC-13	Total Recoverable	Water	6020	352819
400-137162-5	WGWA-14A	Total Recoverable	Water	6020	352819
400-137162-6	WGWC-10	Total Recoverable	Water	6020	352819
400-137162-8	WGWC-8	Total Recoverable	Water	6020	352819
400-137162-9	WGWC-9	Total Recoverable	Water	6020	352819
400-137162-10	WGWC-19	Total Recoverable	Water	6020	352819
400-137162-11	FB-2	Total Recoverable	Water	6020	352819
400-137162-12	FERB-2	Total Recoverable	Water	6020	352819
400-137162-13	DUP-2	Total Recoverable	Water	6020	352819
MB 400-352819/1-A ^5	Method Blank	Total Recoverable	Water	6020	352819
LCS 400-352819/2-A	Lab Control Sample	Total Recoverable	Water	6020	352819
400-137108-A-9-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	352819
400-137108-A-9-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	352819

### Analysis Batch: 353184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137162-7	WGWC-12	Total Recoverable	Water	6020	352959
MB 400-352959/1-A ^5	Method Blank	Total Recoverable	Water	6020	352959
LCS 400-352959/2-A	Lab Control Sample	Total Recoverable	Water	6020	352959

## General Chemistry

### Analysis Batch: 351821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137162-1	WGWA-1	Total/NA	Water	SM 2540C	
400-137162-2	WGWA-2	Total/NA	Water	SM 2540C	
MB 400-351821/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-351821/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-137046-B-4 DU	Duplicate	Total/NA	Water	SM 2540C	

### Analysis Batch: 351822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137162-13	DUP-2	Total/NA	Water	SM 2540C	
MB 400-351822/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-351822/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-137064-B-2 DU	Duplicate	Total/NA	Water	SM 2540C	

### Analysis Batch: 352058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137162-3	WGWC-11	Total/NA	Water	SM 2540C	
400-137162-4	WGWC-13	Total/NA	Water	SM 2540C	
400-137162-5	WGWA-14A	Total/NA	Water	SM 2540C	
400-137162-6	WGWC-10	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

## General Chemistry (Continued)

### Analysis Batch: 352058 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137162-7	WGWC-12	Total/NA	Water	SM 2540C	
400-137162-8	WGWC-8	Total/NA	Water	SM 2540C	
400-137162-9	WGWC-9	Total/NA	Water	SM 2540C	
400-137162-10	WGWC-19	Total/NA	Water	SM 2540C	
400-137162-11	FB-2	Total/NA	Water	SM 2540C	
400-137162-12	FERB-2	Total/NA	Water	SM 2540C	
MB 400-352058/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-352058/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-137162-7 DU	WGWC-12	Total/NA	Water	SM 2540C	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 400-351884/4**  
**Matrix: Water**  
**Analysis Batch: 351884**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			04/30/17 09:28	1
Fluoride	<0.082		0.20	0.082	mg/L			04/30/17 09:28	1
Sulfate	<0.70		1.0	0.70	mg/L			04/30/17 09:28	1

**Lab Sample ID: LCS 400-351884/5**  
**Matrix: Water**  
**Analysis Batch: 351884**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.96		mg/L		100	90 - 110
Fluoride	10.0	10.6		mg/L		106	90 - 110
Sulfate	10.0	10.0		mg/L		100	90 - 110

**Lab Sample ID: LCSD 400-351884/6**  
**Matrix: Water**  
**Analysis Batch: 351884**

**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	10.0	10.0		mg/L		100	90 - 110	0	15
Fluoride	10.0	10.6		mg/L		106	90 - 110	0	15
Sulfate	10.0	10.0		mg/L		100	90 - 110	0	15

**Lab Sample ID: 400-137236-A-1 MS**  
**Matrix: Water**  
**Analysis Batch: 351884**

**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	360	E	50.0	399	E 4	mg/L		70	80 - 120
Fluoride	<0.41		50.0	53.6		mg/L		107	80 - 120
Sulfate	61		50.0	112		mg/L		103	80 - 120

**Lab Sample ID: 400-137236-A-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 351884**

**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	360	E	50.0	398	E 4	mg/L		68	80 - 120	0	20
Fluoride	<0.41		50.0	53.4		mg/L		107	80 - 120	0	20
Sulfate	61		50.0	112		mg/L		103	80 - 120	0	20

**Lab Sample ID: MB 400-351964/4**  
**Matrix: Water**  
**Analysis Batch: 351964**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			05/01/17 19:27	1
Fluoride	<0.082		0.20	0.082	mg/L			05/01/17 19:27	1
Sulfate	<0.70		1.0	0.70	mg/L			05/01/17 19:27	1

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 400-351964/5**  
**Matrix: Water**  
**Analysis Batch: 351964**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.0		mg/L		100	90 - 110
Fluoride	10.0	10.9		mg/L		109	90 - 110
Sulfate	10.0	10.5		mg/L		105	90 - 110

**Lab Sample ID: LCSD 400-351964/6**  
**Matrix: Water**  
**Analysis Batch: 351964**

**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	10.0	9.48		mg/L		95	90 - 110	6	15
Fluoride	10.0	10.4		mg/L		104	90 - 110	5	15
Sulfate	10.0	9.89		mg/L		99	90 - 110	6	15

**Lab Sample ID: 400-137193-G-12 MS**  
**Matrix: Water**  
**Analysis Batch: 351964**

**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	76		50.0	121		mg/L		90	80 - 120
Fluoride	<0.41		50.0	53.4		mg/L		107	80 - 120
Sulfate	170		50.0	218		mg/L		97	80 - 120

**Lab Sample ID: 400-137193-G-12 MSD**  
**Matrix: Water**  
**Analysis Batch: 351964**

**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	76		50.0	121		mg/L		92	80 - 120	1	20
Fluoride	<0.41		50.0	53.7		mg/L		107	80 - 120	1	20
Sulfate	170		50.0	219		mg/L		100	80 - 120	1	20

**Lab Sample ID: MB 400-352273/4**  
**Matrix: Water**  
**Analysis Batch: 352273**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			05/03/17 12:02	1
Fluoride	<0.082		0.20	0.082	mg/L			05/03/17 12:02	1
Sulfate	<0.70		1.0	0.70	mg/L			05/03/17 12:02	1

**Lab Sample ID: LCS 400-352273/5**  
**Matrix: Water**  
**Analysis Batch: 352273**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.0		mg/L		100	90 - 110
Fluoride	10.0	10.4		mg/L		104	90 - 110
Sulfate	10.0	10.3		mg/L		103	90 - 110

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCSD 400-352273/6**  
**Matrix: Water**  
**Analysis Batch: 352273**

**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	10.0	10.0		mg/L		100	90 - 110	0	15
Fluoride	10.0	10.4		mg/L		104	90 - 110	1	15
Sulfate	10.0	10.2		mg/L		102	90 - 110	0	15

**Lab Sample ID: 400-137343-E-1 MS**  
**Matrix: Water**  
**Analysis Batch: 352273**

**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	720	E	100	819	E 4	mg/L		100	80 - 120		
Fluoride	<0.82		100	107		mg/L		107	80 - 120		
Sulfate	<7.0		100	106		mg/L		106	80 - 120		

**Lab Sample ID: 400-137343-E-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 352273**

**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	720	E	100	822	E 4	mg/L		102	80 - 120	0	20
Fluoride	<0.82		100	108		mg/L		108	80 - 120	1	20
Sulfate	<7.0		100	104		mg/L		104	80 - 120	2	20

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 400-352819/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 353042**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 352819**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/08/17 16:18	05/09/17 17:19	5
Arsenic	0.000490	J	0.0013	0.00046	mg/L		05/08/17 16:18	05/09/17 17:19	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/08/17 16:18	05/09/17 17:19	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/09/17 17:19	5
Boron	<0.021		0.050	0.021	mg/L		05/08/17 16:18	05/09/17 17:19	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:18	05/09/17 17:19	5
Calcium	<0.13		0.25	0.13	mg/L		05/08/17 16:18	05/09/17 17:19	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/08/17 16:18	05/09/17 17:19	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/08/17 16:18	05/09/17 17:19	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:18	05/09/17 17:19	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/08/17 16:18	05/09/17 17:19	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/08/17 16:18	05/09/17 17:19	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/08/17 16:18	05/09/17 17:19	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/08/17 16:18	05/09/17 17:19	5

TestAmerica Pensacola



# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 400-352819/2-A**  
**Matrix: Water**  
**Analysis Batch: 353042**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 352819**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0551		mg/L		110	80 - 120
Arsenic	0.0500	0.0502		mg/L		100	80 - 120
Barium	0.0500	0.0473		mg/L		95	80 - 120
Beryllium	0.0500	0.0513		mg/L		103	80 - 120
Boron	0.100	0.105		mg/L		105	80 - 120
Cadmium	0.0500	0.0504		mg/L		101	80 - 120
Calcium	5.00	4.81		mg/L		96	80 - 120
Chromium	0.0500	0.0479		mg/L		96	80 - 120
Cobalt	0.0500	0.0527		mg/L		105	80 - 120
Lead	0.0500	0.0512		mg/L		102	80 - 120
Lithium	0.0500	0.0528		mg/L		106	80 - 120
Molybdenum	0.100	0.0996		mg/L		100	80 - 120
Selenium	0.0500	0.0523		mg/L		105	80 - 120
Thallium	0.0100	0.00976		mg/L		98	80 - 120

**Lab Sample ID: 400-137108-A-9-B MS ^5**  
**Matrix: Water**  
**Analysis Batch: 353042**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 352819**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0573		mg/L		115	75 - 125
Arsenic	0.0050	B	0.0500	0.0557		mg/L		101	75 - 125
Barium	0.39		0.0500	0.435	4	mg/L		90	75 - 125
Beryllium	<0.00034		0.0500	0.0505		mg/L		101	75 - 125
Boron	0.095		0.100	0.193		mg/L		98	75 - 125
Cadmium	<0.00034		0.0500	0.0499		mg/L		100	75 - 125
Calcium	170	E	5.00	177	E 4	mg/L		153	75 - 125
Chromium	<0.0011		0.0500	0.0479		mg/L		96	75 - 125
Cobalt	0.00093	J	0.0500	0.0507		mg/L		100	75 - 125
Lead	0.00063	J	0.0500	0.0505		mg/L		100	75 - 125
Lithium	0.016		0.0500	0.0563		mg/L		81	75 - 125
Molybdenum	0.012	J	0.100	0.112		mg/L		101	75 - 125
Selenium	0.0028		0.0500	0.0534		mg/L		101	75 - 125
Thallium	<0.000085		0.0100	0.00964		mg/L		96	75 - 125

**Lab Sample ID: 400-137108-A-9-C MSD ^5**  
**Matrix: Water**  
**Analysis Batch: 353042**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 352819**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0547		mg/L		109	75 - 125	5	20
Arsenic	0.0050	B	0.0500	0.0552		mg/L		100	75 - 125	1	20
Barium	0.39		0.0500	0.429	4	mg/L		78	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0510		mg/L		102	75 - 125	1	20
Boron	0.095		0.100	0.193		mg/L		98	75 - 125	0	20
Cadmium	<0.00034		0.0500	0.0508		mg/L		102	75 - 125	2	20
Calcium	170	E	5.00	174	E 4	mg/L		102	75 - 125	1	20
Chromium	<0.0011		0.0500	0.0482		mg/L		96	75 - 125	1	20

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 400-137108-A-9-C MSD ^5**  
**Matrix: Water**  
**Analysis Batch: 353042**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 352819**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Cobalt	0.00093	J	0.0500	0.0498		mg/L		98	75 - 125	2	20
Lead	0.00063	J	0.0500	0.0508		mg/L		100	75 - 125	1	20
Lithium	0.016		0.0500	0.0558		mg/L		80	75 - 125	1	20
Molybdenum	0.012	J	0.100	0.109		mg/L		97	75 - 125	3	20
Selenium	0.0028		0.0500	0.0535		mg/L		101	75 - 125	0	20
Thallium	<0.000085		0.0100	0.00976		mg/L		98	75 - 125	1	20

**Lab Sample ID: MB 400-352959/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 353184**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 352959**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.0010		0.0025	0.0010	mg/L		05/09/17 15:33	05/10/17 12:27	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/09/17 15:33	05/10/17 12:27	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/09/17 15:33	05/10/17 12:27	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/09/17 15:33	05/10/17 12:27	5
Boron	<0.021		0.050	0.021	mg/L		05/09/17 15:33	05/10/17 12:27	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/09/17 15:33	05/10/17 12:27	5
Calcium	<0.13		0.25	0.13	mg/L		05/09/17 15:33	05/10/17 12:27	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/09/17 15:33	05/10/17 12:27	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/09/17 15:33	05/10/17 12:27	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/09/17 15:33	05/10/17 12:27	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/09/17 15:33	05/10/17 12:27	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/09/17 15:33	05/10/17 12:27	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/09/17 15:33	05/10/17 12:27	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/09/17 15:33	05/10/17 12:27	5

**Lab Sample ID: LCS 400-352959/2-A**  
**Matrix: Water**  
**Analysis Batch: 353184**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 352959**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
Antimony	0.0500	0.0533		mg/L		107	80 - 120
Arsenic	0.0500	0.0509		mg/L		102	80 - 120
Barium	0.0500	0.0462		mg/L		92	80 - 120
Beryllium	0.0500	0.0494		mg/L		99	80 - 120
Boron	0.100	0.0957		mg/L		96	80 - 120
Cadmium	0.0500	0.0499		mg/L		100	80 - 120
Calcium	5.00	4.78		mg/L		96	80 - 120
Chromium	0.0500	0.0475		mg/L		95	80 - 120
Cobalt	0.0500	0.0502		mg/L		100	80 - 120
Lead	0.0500	0.0491		mg/L		98	80 - 120
Lithium	0.0500	0.0509		mg/L		102	80 - 120
Molybdenum	0.100	0.0990		mg/L		99	80 - 120
Selenium	0.0500	0.0502		mg/L		100	80 - 120
Thallium	0.0100	0.00999		mg/L		100	80 - 120

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 400-352392/14-A**  
**Matrix: Water**  
**Analysis Batch: 352802**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 352392**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/06/17 13:31	05/08/17 13:34	1

**Lab Sample ID: LCS 400-352392/15-A**  
**Matrix: Water**  
**Analysis Batch: 352802**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 352392**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00102		mg/L		101	80 - 120

**Lab Sample ID: 400-137162-1 MS**  
**Matrix: Water**  
**Analysis Batch: 352802**

**Client Sample ID: WGWA-1**  
**Prep Type: Total/NA**  
**Prep Batch: 352392**

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

**Lab Sample ID: 400-137162-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 352802**

**Client Sample ID: WGWA-1**  
**Prep Type: Total/NA**  
**Prep Batch: 352392**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00200		mg/L		99	80 - 120	0	20

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 400-351821/1**  
**Matrix: Water**  
**Analysis Batch: 351821**

**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			04/29/17 14:20	1

**Lab Sample ID: LCS 400-351821/2**  
**Matrix: Water**  
**Analysis Batch: 351821**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	293	254		mg/L		87	78 - 122

**Lab Sample ID: 400-137046-B-4 DU**  
**Matrix: Water**  
**Analysis Batch: 351821**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	62		62.0		mg/L		0	5

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-1  
SDG: Ash Pond

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: MB 400-351822/1**  
**Matrix: Water**  
**Analysis Batch: 351822**

**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			04/29/17 15:11	1

**Lab Sample ID: LCS 400-351822/2**  
**Matrix: Water**  
**Analysis Batch: 351822**

**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	258		mg/L		88	78 - 122

**Lab Sample ID: 400-137064-B-2 DU**  
**Matrix: Water**  
**Analysis Batch: 351822**

**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	62		62.0		mg/L		0	5

**Lab Sample ID: MB 400-352058/1**  
**Matrix: Water**  
**Analysis Batch: 352058**

**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			05/02/17 17:02	1

**Lab Sample ID: LCS 400-352058/2**  
**Matrix: Water**  
**Analysis Batch: 352058**

**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: 400-137162-7 DU**  
**Matrix: Water**  
**Analysis Batch: 352058**

**Client Sample ID: WGWC-12**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	100		100		mg/L		0	5

**TestAmerica Pensacola**  
 3355 McLemore Drive  
 Pensacola, FL 32514  
 Phone (850) 474-1001 Fax (850) 478-2671

### Chain of Custody Record

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING

Sampler: T. Payne P. 1. Thomas T  
 Lab PM: Whitmire, Cheyenne R  
 Client Contact: Joju Abraham  
 Phone: cheyenne.whitmire@testamericainc.com  
 E-Mail: cheyenne.whitmire@testamericainc.com

Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

Due Date Requested:  
 TAT Requested (days):  
 PO #:  
 WO #:  
 Project #:  
 SSO#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=particulate, BT=TISSUE, A=AIR)	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470		Radium 226 & 228 - SW-846 9315 & 9320		Total Number of Containers	Special Instructions/Note:
					Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	I	D	D	D	X	X		
WGWA-1	4/24/17	1545	G	W	X	X	X	X	X	X	X	X	3	
WGWA-2	4/24/17	1605	G	W	X	X	X	X	X	X	X	X	3	



**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months  
 Special Instructions/QC Requirements:

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: 4/26/17 1235  
 Relinquished by: \_\_\_\_\_ Date/Time: 4/26/17 1600  
 Custody Seal No.:  Yes  No

Received by: \_\_\_\_\_ Date/Time: 4/26/17 1235  
 Received by: \_\_\_\_\_ Date/Time: 4/26/17 0945  
 Received by: \_\_\_\_\_ Date/Time: 4/26/17 0945  
 Cooler Temperature(s) °C and Other Remarks: 2.8, 2.2, 2.2, 2.2

681-Atlanta



3355 McLemore Drive  
Pensacola, FL 32514  
Phone (850) 474-1001 Fax (850) 478-2671

# Chain of Custody Record



**Client Information**  
 Client Contact: Joju Abraham  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B 10185  
 City: Atlanta  
 State: GA, Zip: 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

**Sampler:** T. Payne TP, T. Thomas TT, M. Rogers Jr.  
**Lab PM:** Whitmire, Cheyenne R  
**Phone:** cheyenne.whitmire@testamericainc.com  
**Page:** [Blank]  
**COC No.:** [Blank]  
**Job #:** 400-137162

**Analysis Requested**  
 Due Date Requested: [Blank]  
 TAT Requested (days): [Blank]  
 FO #: [Blank]  
 WO #: [Blank]  
 Project #: [Blank]  
 SSO#: [Blank]

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastefoil, BT=tissue, A=air)	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470		Radium 226 & 228 - SW-846 9315 & 9320	Total Number of Containers	Special Instructions/Note:
					Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	I	D	D			
WGWC-11	4/26/17	0955	G	W	X	X	X	X	X	X		3	
WGWC-13	4/26/17	1015	G	W	X	X	X	X	X	X		4	Extra radium sample collected for lab QA/QC
WGWA-14A	4/26/17	1200	G	W	X	X	X	X	X	X		3	
WGWC-10	4/26/17	1216	G	W	X	X	X	X	X	X		3	
WGWC-12	4/26/17	1335	G	W	X	X	X	X	X	X		3	
WGWC-8	4/26/17	1419	G	W	X	X	X	X	X	X		3	
WGWC-9	4/26/17	1420	G	W	X	X	X	X	X	X		3	
WGWC-19	4/26/17	1442	G	W	X	X	X	X	X	X		3	
FB-2	4/26/17	1010	G	W	X	X	X	X	X	X		3	
FERB-2	4/26/17	1240	G	W	X	X	X	X	X	X		3	
DUP-2	4/26/17	--	G	W	X	X	X	X	X	X		3	

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify) [Blank]

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Special Instructions/QC Requirements: [Blank]

Relinquished by:	Date:	Company:	Relinquished by:	Date:	Company:
[Signature]	4/27/17 1310	Company	[Signature]	4/28/17 1315	Company
[Signature]	4/28/17 1630	Company	[Signature]	4/28/17 0913	Company
[Signature]		Company	[Signature]		Company

Custody Seals Intact:  Custody Seal No.: [Blank]  
 Cooler Temperature(s) °C and Other Remarks: 39 I Ra



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-137162-1

SDG Number: Ash Pond

**Login Number: 137162**

**List Number: 1**

**Creator: Siddoway, Benjamin**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8°C, 2.2°C, 3.9°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 Wansley

TestAmerica Job ID: 400-137162-1  
 SDG: Ash Pond

## 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	06-30-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17 *
West Virginia DEP	State Program	3	136	06-30-17

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-137162-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR - Plant Wansley

For:

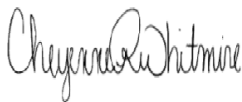
Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

5/31/2017 5:32:29 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

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[www.testamericainc.com](http://www.testamericainc.com)

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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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# Method Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
SDG: Ash Pond

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 Wansley

TestAmerica Job ID: 400-137162-2  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-137162-1	WGWA-1	Water	04/24/17 15:45	04/27/17 09:15
400-137162-2	WGWA-2	Water	04/24/17 16:05	04/27/17 09:15
400-137162-3	WGWC-11	Water	04/26/17 09:55	04/28/17 09:13
400-137162-4	WGWC-13	Water	04/26/17 10:15	04/28/17 09:13
400-137162-5	WGWA-14A	Water	04/26/17 12:00	04/28/17 09:13
400-137162-6	WGWC-10	Water	04/26/17 12:16	04/28/17 09:13
400-137162-7	WGWC-12	Water	04/26/17 13:35	04/28/17 09:13
400-137162-8	WGWC-8	Water	04/26/17 14:19	04/28/17 09:13
400-137162-9	WGWC-9	Water	04/26/17 14:20	04/28/17 09:13
400-137162-10	WGWC-19	Water	04/26/17 14:42	04/28/17 09:13
400-137162-11	FB-2	Water	04/26/17 10:10	04/28/17 09:13
400-137162-12	FERB-2	Water	04/26/17 12:40	04/28/17 09:13
400-137162-13	DUP-2	Water	04/26/17 00:00	04/28/17 09:13

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
SDG: Ash Pond

**Client Sample ID: WGWA-1**

**Lab Sample ID: 400-137162-1**

Date Collected: 04/24/17 15:45

Matrix: Water

Date Received: 04/27/17 09:15

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0255	U	0.0501	0.0501	1.00	0.0903	pCi/L	05/05/17 07:55	05/29/17 20:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					05/05/17 07:55	05/29/17 20:42	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.334	U	0.236	0.238	1.00	0.367	pCi/L	05/05/17 08:21	05/19/17 16:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					05/05/17 08:21	05/19/17 16:02	1
Y Carrier	84.1		40 - 110					05/05/17 08:21	05/19/17 16:02	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.360	U	0.241	0.243	5.00	0.367	pCi/L		05/31/17 14:25	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
SDG: Ash Pond

**Client Sample ID: WGWA-2**

**Lab Sample ID: 400-137162-2**

Date Collected: 04/24/17 16:05

Matrix: Water

Date Received: 04/27/17 09:15

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0484	U	0.0579	0.0580	1.00	0.0945	pCi/L	05/05/17 07:55	05/29/17 20:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					05/05/17 07:55	05/29/17 20:42	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.319	U	0.229	0.231	1.00	0.357	pCi/L	05/05/17 08:21	05/19/17 16:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					05/05/17 08:21	05/19/17 16:02	1
Y Carrier	87.9		40 - 110					05/05/17 08:21	05/19/17 16:02	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.367		0.236	0.238	5.00	0.357	pCi/L		05/31/17 14:25	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
SDG: Ash Pond

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-137162-3**

Date Collected: 04/26/17 09:55

Matrix: Water

Date Received: 04/28/17 09:13

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0269	U	0.0489	0.0489	1.00	0.0872	pCi/L	05/05/17 07:55	05/29/17 20:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/05/17 07:55	05/29/17 20:43	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.00404	U	0.204	0.204	1.00	0.365	pCi/L	05/05/17 08:21	05/19/17 16:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/05/17 08:21	05/19/17 16:02	1
Y Carrier	85.2		40 - 110					05/05/17 08:21	05/19/17 16:02	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0309	U	0.210	0.210	5.00	0.365	pCi/L		05/31/17 14:25	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
SDG: Ash Pond

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-137162-4**

Date Collected: 04/26/17 10:15

Matrix: Water

Date Received: 04/28/17 09:13

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.238		0.0882	0.0907	1.00	0.0773	pCi/L	05/05/17 07:55	05/29/17 20:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					05/05/17 07:55	05/29/17 20:43	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.170	U	0.288	0.288	1.00	0.484	pCi/L	05/05/17 08:21	05/19/17 16:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					05/05/17 08:21	05/19/17 16:03	1
Y Carrier	86.0		40 - 110					05/05/17 08:21	05/19/17 16:03	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.408	U	0.301	0.302	5.00	0.484	pCi/L		05/31/17 14:25	1



# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
 SDG: Ash Pond

**Client Sample ID: WGWA-14A**

**Lab Sample ID: 400-137162-5**

Date Collected: 04/26/17 12:00

Matrix: Water

Date Received: 04/28/17 09:13

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.265		0.0965	0.0994	1.00	0.0953	pCi/L	05/05/17 07:55	05/29/17 20:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					05/05/17 07:55	05/29/17 20:43	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.169	U	0.231	0.231	1.00	0.385	pCi/L	05/05/17 08:21	05/19/17 16:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					05/05/17 08:21	05/19/17 16:03	1
Y Carrier	86.0		40 - 110					05/05/17 08:21	05/19/17 16:03	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.434		0.250	0.252	5.00	0.385	pCi/L		05/31/17 14:25	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
SDG: Ash Pond

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-137162-6**

Date Collected: 04/26/17 12:16

Matrix: Water

Date Received: 04/28/17 09:13

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.000689	U	0.0500	0.0500	1.00	0.103	pCi/L	05/05/17 07:55	05/29/17 20:43	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	95.0		40 - 110					05/05/17 07:55	05/29/17 20:43	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0683	U	0.219	0.219	1.00	0.382	pCi/L	05/05/17 08:21	05/19/17 16:03	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	95.0		40 - 110					05/05/17 08:21	05/19/17 16:03	1
Y Carrier	86.7		40 - 110					05/05/17 08:21	05/19/17 16:03	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0690	U	0.225	0.225	5.00	0.382	pCi/L		05/31/17 14:25	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
SDG: Ash Pond

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-137162-7**

Date Collected: 04/26/17 13:35

Matrix: Water

Date Received: 04/28/17 09:13

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.152		0.0748	0.0761	1.00	0.0893	pCi/L	05/05/17 07:55	05/29/17 21:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					05/05/17 07:55	05/29/17 21:00	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.114	U	0.219	0.219	1.00	0.372	pCi/L	05/05/17 08:21	05/19/17 16:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					05/05/17 08:21	05/19/17 16:03	1
Y Carrier	90.5		40 - 110					05/05/17 08:21	05/19/17 16:03	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.267	U	0.232	0.232	5.00	0.372	pCi/L		05/31/17 14:25	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
SDG: Ash Pond

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-137162-8**

Date Collected: 04/26/17 14:19

Matrix: Water

Date Received: 04/28/17 09:13

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.274		0.0982	0.101	1.00	0.103	pCi/L	05/05/17 07:55	05/29/17 21:00	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	101		40 - 110					05/05/17 07:55	05/29/17 21:00	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.793		0.255	0.266	1.00	0.336	pCi/L	05/05/17 08:21	05/19/17 16:03	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	101		40 - 110					05/05/17 08:21	05/19/17 16:03	1
Y Carrier	90.8		40 - 110					05/05/17 08:21	05/19/17 16:03	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.07		0.274	0.284	5.00	0.336	pCi/L		05/31/17 14:25	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
SDG: Ash Pond

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-137162-9**

Date Collected: 04/26/17 14:20

Matrix: Water

Date Received: 04/28/17 09:13

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0182	U	0.0487	0.0487	1.00	0.0911	pCi/L	05/05/17 07:55	05/29/17 21:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					05/05/17 07:55	05/29/17 21:01	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.122	U	0.203	0.204	1.00	0.344	pCi/L	05/05/17 08:21	05/19/17 16:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					05/05/17 08:21	05/19/17 16:03	1
Y Carrier	88.2		40 - 110					05/05/17 08:21	05/19/17 16:03	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.140	U	0.209	0.209	5.00	0.344	pCi/L		05/31/17 14:25	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
SDG: Ash Pond

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-137162-10**

Date Collected: 04/26/17 14:42

Matrix: Water

Date Received: 04/28/17 09:13

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0471	U	0.0516	0.0517	1.00	0.0820	pCi/L	05/05/17 07:55	05/29/17 21:01	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	99.7		40 - 110					05/05/17 07:55	05/29/17 21:01	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.173	U	0.219	0.220	1.00	0.364	pCi/L	05/05/17 08:21	05/19/17 16:03	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	99.7		40 - 110					05/05/17 08:21	05/19/17 16:03	1
Y Carrier	89.3		40 - 110					05/05/17 08:21	05/19/17 16:03	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.220	U	0.225	0.226	5.00	0.364	pCi/L		05/31/17 14:25	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
 SDG: Ash Pond

**Client Sample ID: FB-2**  
**Date Collected: 04/26/17 10:10**  
**Date Received: 04/28/17 09:13**

**Lab Sample ID: 400-137162-11**  
**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	-0.0120	U	0.0379	0.0380	1.00	0.0877	pCi/L	05/05/17 07:55	05/29/17 21:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					05/05/17 07:55	05/29/17 21:01	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0101	U	0.189	0.189	1.00	0.343	pCi/L	05/05/17 08:21	05/19/17 16:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					05/05/17 08:21	05/19/17 16:03	1
Y Carrier	85.6		40 - 110					05/05/17 08:21	05/19/17 16:03	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0222	U	0.193	0.193	5.00	0.343	pCi/L		05/31/17 14:25	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
SDG: Ash Pond

**Client Sample ID: FERB-2**

**Lab Sample ID: 400-137162-12**

Date Collected: 04/26/17 12:40

Matrix: Water

Date Received: 04/28/17 09:13

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00252	U	0.0395	0.0395	1.00	0.0826	pCi/L	05/05/17 07:55	05/29/17 21:02	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	102		40 - 110					05/05/17 07:55	05/29/17 21:02	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0114	U	0.178	0.178	1.00	0.320	pCi/L	05/05/17 08:21	05/19/17 16:03	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	102		40 - 110					05/05/17 08:21	05/19/17 16:03	1
Y Carrier	89.7		40 - 110					05/05/17 08:21	05/19/17 16:03	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0139	U	0.183	0.183	5.00	0.320	pCi/L		05/31/17 14:25	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
SDG: Ash Pond

**Client Sample ID: DUP-2**

**Lab Sample ID: 400-137162-13**

Date Collected: 04/26/17 00:00

Matrix: Water

Date Received: 04/28/17 09:13

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0521	U	0.0640	0.0642	1.00	0.105	pCi/L	05/05/17 07:55	05/30/17 12:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					05/05/17 07:55	05/30/17 12:13	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.138	U	0.201	0.202	1.00	0.338	pCi/L	05/05/17 08:21	05/19/17 16:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					05/05/17 08:21	05/19/17 16:03	1
Y Carrier	90.5		40 - 110					05/05/17 08:21	05/19/17 16:03	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.190	U	0.211	0.212	5.00	0.338	pCi/L		05/31/17 14:25	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
SDG: Ash Pond

## Qualifiers

### Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
SDG: Ash Pond

## Client Sample ID: WGWA-1

Lab Sample ID: 400-137162-1

Date Collected: 04/24/17 15:45

Matrix: Water

Date Received: 04/27/17 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307323	05/05/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	310981	05/29/17 20:42	ALD	TAL SL
Total/NA	Prep	PrecSep_0			307327	05/05/17 08:21	LDE	TAL SL
Total/NA	Analysis	9320		1	309640	05/19/17 16:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311374	05/31/17 14:25	RTM	TAL SL

## Client Sample ID: WGWA-2

Lab Sample ID: 400-137162-2

Date Collected: 04/24/17 16:05

Matrix: Water

Date Received: 04/27/17 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307323	05/05/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	310981	05/29/17 20:42	ALD	TAL SL
Total/NA	Prep	PrecSep_0			307327	05/05/17 08:21	LDE	TAL SL
Total/NA	Analysis	9320		1	309640	05/19/17 16:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311374	05/31/17 14:25	RTM	TAL SL

## Client Sample ID: WGWC-11

Lab Sample ID: 400-137162-3

Date Collected: 04/26/17 09:55

Matrix: Water

Date Received: 04/28/17 09:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307323	05/05/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	310981	05/29/17 20:43	ALD	TAL SL
Total/NA	Prep	PrecSep_0			307327	05/05/17 08:21	LDE	TAL SL
Total/NA	Analysis	9320		1	309640	05/19/17 16:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311374	05/31/17 14:25	RTM	TAL SL

## Client Sample ID: WGWC-13

Lab Sample ID: 400-137162-4

Date Collected: 04/26/17 10:15

Matrix: Water

Date Received: 04/28/17 09:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307323	05/05/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	310981	05/29/17 20:43	ALD	TAL SL
Total/NA	Prep	PrecSep_0			307327	05/05/17 08:21	LDE	TAL SL
Total/NA	Analysis	9320		1	309640	05/19/17 16:03	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311374	05/31/17 14:25	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
SDG: Ash Pond

## Client Sample ID: WGWA-14A

Lab Sample ID: 400-137162-5

Date Collected: 04/26/17 12:00

Matrix: Water

Date Received: 04/28/17 09:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307323	05/05/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	310981	05/29/17 20:43	ALD	TAL SL
Total/NA	Prep	PrecSep_0			307327	05/05/17 08:21	LDE	TAL SL
Total/NA	Analysis	9320		1	309640	05/19/17 16:03	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311374	05/31/17 14:25	RTM	TAL SL

## Client Sample ID: WGWC-10

Lab Sample ID: 400-137162-6

Date Collected: 04/26/17 12:16

Matrix: Water

Date Received: 04/28/17 09:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307323	05/05/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	310981	05/29/17 20:43	ALD	TAL SL
Total/NA	Prep	PrecSep_0			307327	05/05/17 08:21	LDE	TAL SL
Total/NA	Analysis	9320		1	309640	05/19/17 16:03	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311374	05/31/17 14:25	RTM	TAL SL

## Client Sample ID: WGWC-12

Lab Sample ID: 400-137162-7

Date Collected: 04/26/17 13:35

Matrix: Water

Date Received: 04/28/17 09:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307323	05/05/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	310982	05/29/17 21:00	ALD	TAL SL
Total/NA	Prep	PrecSep_0			307327	05/05/17 08:21	LDE	TAL SL
Total/NA	Analysis	9320		1	309640	05/19/17 16:03	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311374	05/31/17 14:25	RTM	TAL SL

## Client Sample ID: WGWC-8

Lab Sample ID: 400-137162-8

Date Collected: 04/26/17 14:19

Matrix: Water

Date Received: 04/28/17 09:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307323	05/05/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	310982	05/29/17 21:00	ALD	TAL SL
Total/NA	Prep	PrecSep_0			307327	05/05/17 08:21	LDE	TAL SL
Total/NA	Analysis	9320		1	309640	05/19/17 16:03	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311374	05/31/17 14:25	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
SDG: Ash Pond

## Client Sample ID: WGWC-9

Lab Sample ID: 400-137162-9

Date Collected: 04/26/17 14:20

Matrix: Water

Date Received: 04/28/17 09:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307323	05/05/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	310982	05/29/17 21:01	ALD	TAL SL
Total/NA	Prep	PrecSep_0			307327	05/05/17 08:21	LDE	TAL SL
Total/NA	Analysis	9320		1	309640	05/19/17 16:03	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311374	05/31/17 14:25	RTM	TAL SL

## Client Sample ID: WGWC-19

Lab Sample ID: 400-137162-10

Date Collected: 04/26/17 14:42

Matrix: Water

Date Received: 04/28/17 09:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307323	05/05/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	310982	05/29/17 21:01	ALD	TAL SL
Total/NA	Prep	PrecSep_0			307327	05/05/17 08:21	LDE	TAL SL
Total/NA	Analysis	9320		1	309640	05/19/17 16:03	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311374	05/31/17 14:25	RTM	TAL SL

## Client Sample ID: FB-2

Lab Sample ID: 400-137162-11

Date Collected: 04/26/17 10:10

Matrix: Water

Date Received: 04/28/17 09:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307323	05/05/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	310982	05/29/17 21:01	ALD	TAL SL
Total/NA	Prep	PrecSep_0			307327	05/05/17 08:21	LDE	TAL SL
Total/NA	Analysis	9320		1	309640	05/19/17 16:03	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311374	05/31/17 14:25	RTM	TAL SL

## Client Sample ID: FERB-2

Lab Sample ID: 400-137162-12

Date Collected: 04/26/17 12:40

Matrix: Water

Date Received: 04/28/17 09:13

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307323	05/05/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	310982	05/29/17 21:02	ALD	TAL SL
Total/NA	Prep	PrecSep_0			307327	05/05/17 08:21	LDE	TAL SL
Total/NA	Analysis	9320		1	309640	05/19/17 16:03	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311374	05/31/17 14:25	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
SDG: Ash Pond

**Client Sample ID: DUP-2**

**Lab Sample ID: 400-137162-13**

**Date Collected: 04/26/17 00:00**

**Matrix: Water**

**Date Received: 04/28/17 09:13**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			307323	05/05/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	311127	05/30/17 12:13	RTM	TAL SL
Total/NA	Prep	PrecSep_0			307327	05/05/17 08:21	LDE	TAL SL
Total/NA	Analysis	9320		1	309640	05/19/17 16:03	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311374	05/31/17 14:25	RTM	TAL SL

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



# QC Association Summary

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
 SDG: Ash Pond

## Rad

### Prep Batch: 307323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137162-1	WGWA-1	Total/NA	Water	PrecSep-21	
400-137162-2	WGWA-2	Total/NA	Water	PrecSep-21	
400-137162-3	WGWC-11	Total/NA	Water	PrecSep-21	
400-137162-4	WGWC-13	Total/NA	Water	PrecSep-21	
400-137162-5	WGWA-14A	Total/NA	Water	PrecSep-21	
400-137162-6	WGWC-10	Total/NA	Water	PrecSep-21	
400-137162-7	WGWC-12	Total/NA	Water	PrecSep-21	
400-137162-8	WGWC-8	Total/NA	Water	PrecSep-21	
400-137162-9	WGWC-9	Total/NA	Water	PrecSep-21	
400-137162-10	WGWC-19	Total/NA	Water	PrecSep-21	
400-137162-11	FB-2	Total/NA	Water	PrecSep-21	
400-137162-12	FERB-2	Total/NA	Water	PrecSep-21	
400-137162-13	DUP-2	Total/NA	Water	PrecSep-21	
MB 160-307323/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-307323/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-137162-4 DU	WGWC-13	Total/NA	Water	PrecSep-21	

### Prep Batch: 307327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137162-1	WGWA-1	Total/NA	Water	PrecSep_0	
400-137162-2	WGWA-2	Total/NA	Water	PrecSep_0	
400-137162-3	WGWC-11	Total/NA	Water	PrecSep_0	
400-137162-4	WGWC-13	Total/NA	Water	PrecSep_0	
400-137162-5	WGWA-14A	Total/NA	Water	PrecSep_0	
400-137162-6	WGWC-10	Total/NA	Water	PrecSep_0	
400-137162-7	WGWC-12	Total/NA	Water	PrecSep_0	
400-137162-8	WGWC-8	Total/NA	Water	PrecSep_0	
400-137162-9	WGWC-9	Total/NA	Water	PrecSep_0	
400-137162-10	WGWC-19	Total/NA	Water	PrecSep_0	
400-137162-11	FB-2	Total/NA	Water	PrecSep_0	
400-137162-12	FERB-2	Total/NA	Water	PrecSep_0	
400-137162-13	DUP-2	Total/NA	Water	PrecSep_0	
MB 160-307327/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-307327/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-137162-4 DU	WGWC-13	Total/NA	Water	PrecSep_0	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
SDG: Ash Pond

## Method: 9315 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-307323/1-A**  
**Matrix: Water**  
**Analysis Batch: 310981**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 307323**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.01234	U	0.0327	0.0327	1.00	0.0823	pCi/L	05/05/17 07:55	05/29/17 20:41	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	40 - 110							
	94.4				05/05/17 07:55	05/29/17 20:41	1			

**Lab Sample ID: LCS 160-307323/2-A**  
**Matrix: Water**  
**Analysis Batch: 310981**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 307323**

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	10.33		1.07	1.00	0.0944	pCi/L	91	68 - 137
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier	40 - 110						
	104				05/05/17 07:55	05/29/17 20:41	1		

**Lab Sample ID: 400-137162-4 DU**  
**Matrix: Water**  
**Analysis Batch: 310981**

**Client Sample ID: WGWC-13**  
**Prep Type: Total/NA**  
**Prep Batch: 307323**

Analyte	Sample Sample		DU DU		Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.238		0.2189		0.0940	1.00	0.102	pCi/L	0.10	1
Carrier	DU DU		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	40 - 110							
	97.3				05/05/17 08:21	05/19/17 16:01	1			

## Method: 9320 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-307327/1-A**  
**Matrix: Water**  
**Analysis Batch: 309640**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 307327**

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.09108	U	0.226	0.226	1.00	0.389	pCi/L	05/05/17 08:21	05/19/17 16:01	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	40 - 110							
	94.4				05/05/17 08:21	05/19/17 16:01	1			
Y Carrier	%Yield	Qualifier	40 - 110		Prepared	Analyzed	Dil Fac			
	85.6							05/05/17 08:21	05/19/17 16:01	1



# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
SDG: Ash Pond

## Method: 9320 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-307327/2-A**

**Matrix: Water**

**Analysis Batch: 309640**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 307327**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.4	14.55		1.54	1.00	0.311	pCi/L	108	56 - 140
<b>Carrier</b>									
	<b>%Yield</b>	<b>LCS</b>	<b>Qualifier</b>	<b>Limits</b>					
Ba Carrier	104			40 - 110					
Y Carrier	90.5			40 - 110					

**Lab Sample ID: 400-137162-4 DU**

**Matrix: Water**

**Analysis Batch: 309640**

**Client Sample ID: WGWC-13**

**Prep Type: Total/NA**

**Prep Batch: 307327**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.170	U	0.1273	U	0.225	1.00	0.380	pCi/L	0.08	1
<b>Carrier</b>										
	<b>%Yield</b>	<b>DU</b>	<b>Qualifier</b>	<b>Limits</b>						
Ba Carrier	97.3			40 - 110						
Y Carrier	89.7			40 - 110						

## Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

**Lab Sample ID: 400-137162-4 DU**

**Matrix: Water**

**Analysis Batch: 311374**

**Client Sample ID: WGWC-13**

**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	0.408	U	0.3462	U	0.243	5.00	0.380	pCi/L	0.11	

**TestAmerica Pensacola**  
 3355 McLemore Drive  
 Pensacola, FL 32514  
 Phone (850) 474-1001 Fax (850) 478-2671

**Chain of Custody Record**

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING

Lab PM: Whitmire, Cheyenne R  
 Carrier Tracking No(s):  
 Sampler: T. Payne P. 1. Thomas T  
 Phone:  
 Client Contact: Joju Abraham  
 E-Mail: cheyenne.whitmire@testamericainc.com  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

Due Date Requested:  
 TAT Requested (days):  
 PO #:  
 WO #:  
 Project #:  
 SSO#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=particulate, BT=TISSUE, A=AIR)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320	Total Number of Containers	Special Instructions/Note:
WGWA-1	4/24/17	1545	G	W	X	X	X	X	3	
WGWA-2	4/24/17	1605	G	W	X	X	X	X	3	

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 - AshNaO2  
 P - Na2O4S  
 Q - Na2SO3  
 R - Na2SO3  
 S - H2SO4  
 T - TSP Dodecahydrate  
 U - Acetone  
 V - MCAA  
 W - ph 4-5  
 Z - other (specify)

Analysis Requested  
 400-137162 COC  
 QR Code: 400-137162 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 Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: 4/26/17 1235  
 Relinquished by: \_\_\_\_\_ Date/Time: 4/26/17 1600  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Custody Seals Intact:  Yes  No  
 Custody Seal No.: \_\_\_\_\_  
 Cooler Temperature(s) °C and Other Remarks: 2.8, 2.2, 2.2, 2.2

Received by: \_\_\_\_\_ Date/Time: 4/26/17 1235  
 Received by: \_\_\_\_\_ Date/Time: 4/26/17 0945  
 Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Company: \_\_\_\_\_



# Chain of Custody Record

3355 McLemore Drive  
Pensacola, FL 32514  
Phone (850) 474-1001 Fax (850) 478-2671

**Client Information**  
 Client Contact: T. Payne TP, T. Thomas TT, M. Rogers JR, Whitmire, Cheyenne R  
 Phone: [Blank] E-Mail: cheyenne.whitmire@testamericainc.com  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State: GA, Zip: 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastefoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470		Radium 226 & 228 - SW-846 9315 & 9320		Total Number of Containers	Special Instructions/Note:
					Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TDS - SM 2540C : Cl, F, SO4 - EPA 300	I	D	I	D		
WGWC-11	4/26/17	0955	G	W	X	X	X	X	X	X	X	3		
WGWC-13	4/26/17	1015	G	W	X	X	X	X	X	X	X	4	Extra radium sample collected for lab QA/QC	
WGWA-14A	4/26/17	1200	G	W	X	X	X	X	X	X	X	3		
WGWC-10	4/26/17	1216	G	W	X	X	X	X	X	X	X	3		
WGWC-12	4/26/17	1335	G	W	X	X	X	X	X	X	X	3		
WGWC-8	4/26/17	1419	G	W	X	X	X	X	X	X	X	3		
WGWC-9	4/26/17	1420	G	W	X	X	X	X	X	X	X	3		
WGWC-19	4/26/17	1442	G	W	X	X	X	X	X	X	X	3		
FB-2	4/26/17	1010	G	W	X	X	X	X	X	X	X	3		
FERB-2	4/26/17	1240	G	W	X	X	X	X	X	X	X	3		
DUP-2	4/26/17	--	G	W	X	X	X	X	X	X	X	3		

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

**Special Instructions/QC Requirements:**

Empty Kit Relinquished by: [Signature] Date: 4/27/17 / 1310 Company: [Blank]  
 Relinquished by: [Signature] Date: 4/28/17 / 1630 Company: [Blank]  
 Relinquished by: [Signature] Date: [Blank] Company: [Blank]

Relinquished by: [Signature] Date: 4/28/17 / 1315 Company: JA  
 Relinquished by: [Signature] Date: 4/28/17 / 0913 Company: JA  
 Relinquished by: [Signature] Date: [Blank] Company: [Blank]

Custody Seal No.: [Blank] Cooler Temperature(s) °C and Other Remarks: 39 J Ra



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-137162-2

SDG Number: Ash Pond

**Login Number: 137162**

**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.	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	2.8°C, 2.2°C, 3.9°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	



## Accreditation/Certification Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
SDG: Ash Pond

### Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	06-30-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17 *
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	03-31-19
Florida	NELAP	4	E87689	06-30-17 *
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17 *
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17 *
Nevada	State Program	9	MO000542017-1	07-31-17 *
New Jersey	NELAP	2	MO002	06-30-17 *
New York	NELAP	2	11616	03-31-18

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Pensacola

## Accreditation/Certification Summary

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-137162-2  
 SDG: Ash Pond

### 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	06-14-17 *
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

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: 400-138125-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR - Plant Wansley

For:

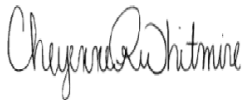
Southern Company

Southern Accounts Payable-SCS

PO BOX 830749

Birmingham, Alabama 35283

Attn: Accounts Payable



Authorized for release by:

5/31/2017 12:11:29 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

Review your project  
results through

Total Access

Have a Question?



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[www.testamericainc.com](http://www.testamericainc.com)

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-1  
SDG: Ash Pond

**Job ID: 400-138125-1**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-138125-1

#### HPLC/IC

Method(s) 300.0: The matrix spike duplicate (MSD) recoveries for analytical batch 354450 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

#### Metals

Method(s) 6020: The method blank for preparation batch 354755 and analytical batch 354912 contained Boron 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.

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# Detection Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-1  
SDG: Ash Pond

## Client Sample ID: WGWC-14A

## Lab Sample ID: 400-138125-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.9		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	12	F1	1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0014		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.052		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	5.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.011		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0033	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	68		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: DUP-1

## Lab Sample ID: 400-138125-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.9		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	13		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0015		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.055		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	5.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.011		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	100		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FB-1

## Lab Sample ID: 400-138125-3

No Detections.

## Client Sample ID: FERB-1

## Lab Sample ID: 400-138125-4

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Method Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-1  
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN

#### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 Wansley

TestAmerica Job ID: 400-138125-1  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-138125-1	WGWC-14A	Water	05/17/17 10:30	05/18/17 08:33
400-138125-2	DUP-1	Water	05/17/17 00:00	05/18/17 08:33
400-138125-3	FB-1	Water	05/17/17 10:45	05/18/17 08:33
400-138125-4	FERB-1	Water	05/17/17 10:50	05/18/17 08:33

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# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-1  
SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Lab Sample ID: 400-138125-1**

**Date Collected: 05/17/17 10:30**

**Matrix: Water**

**Date Received: 05/18/17 08:33**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.9</b>		1.0	0.89	mg/L			05/22/17 17:48	1
Fluoride	<0.082		0.20	0.082	mg/L			05/22/17 17:48	1
<b>Sulfate</b>	<b>12</b>	<b>F1</b>	1.0	0.70	mg/L			05/22/17 17:48	1

### 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		05/24/17 10:41	05/24/17 20:34	5
<b>Arsenic</b>	<b>0.0014</b>		0.0013	0.00046	mg/L		05/24/17 10:41	05/24/17 20:34	5
<b>Barium</b>	<b>0.052</b>		0.0025	0.00049	mg/L		05/24/17 10:41	05/24/17 20:34	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/24/17 10:41	05/24/17 20:34	5
Boron	<0.021		0.050	0.021	mg/L		05/24/17 10:41	05/24/17 20:34	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/24/17 10:41	05/24/17 20:34	5
<b>Calcium</b>	<b>5.2</b>		0.25	0.13	mg/L		05/24/17 10:41	05/24/17 20:34	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/24/17 10:41	05/24/17 20:34	5
<b>Cobalt</b>	<b>0.011</b>		0.0025	0.00040	mg/L		05/24/17 10:41	05/24/17 20:34	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/24/17 10:41	05/24/17 20:34	5
<b>Lithium</b>	<b>0.0033</b>	<b>J</b>	0.0050	0.0032	mg/L		05/24/17 10:41	05/24/17 20:34	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/24/17 10:41	05/24/17 20:34	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/24/17 10:41	05/24/17 20:34	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/24/17 10:41	05/24/17 20:34	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		05/23/17 12:54	05/26/17 13:18	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>68</b>		5.0	3.4	mg/L			05/20/17 14:57	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-1  
SDG: Ash Pond

**Client Sample ID: DUP-1**

**Date Collected: 05/17/17 00:00**

**Date Received: 05/18/17 08:33**

**Lab Sample ID: 400-138125-2**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.9</b>		1.0	0.89	mg/L			05/22/17 18:57	1
Fluoride	<0.082		0.20	0.082	mg/L			05/22/17 18:57	1
<b>Sulfate</b>	<b>13</b>		1.0	0.70	mg/L			05/22/17 18:57	1

### 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		05/24/17 10:41	05/24/17 20:39	5
<b>Arsenic</b>	<b>0.0015</b>		0.0013	0.00046	mg/L		05/24/17 10:41	05/24/17 20:39	5
<b>Barium</b>	<b>0.055</b>		0.0025	0.00049	mg/L		05/24/17 10:41	05/24/17 20:39	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/24/17 10:41	05/24/17 20:39	5
Boron	<0.021		0.050	0.021	mg/L		05/24/17 10:41	05/24/17 20:39	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/24/17 10:41	05/24/17 20:39	5
<b>Calcium</b>	<b>5.2</b>		0.25	0.13	mg/L		05/24/17 10:41	05/24/17 20:39	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/24/17 10:41	05/24/17 20:39	5
<b>Cobalt</b>	<b>0.011</b>		0.0025	0.00040	mg/L		05/24/17 10:41	05/24/17 20:39	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/24/17 10:41	05/24/17 20:39	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/24/17 10:41	05/24/17 20:39	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/24/17 10:41	05/24/17 20:39	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/24/17 10:41	05/24/17 20:39	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/24/17 10:41	05/24/17 20:39	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		05/23/17 12:54	05/26/17 13:20	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>100</b>		5.0	3.4	mg/L			05/20/17 14:57	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-1  
SDG: Ash Pond

**Client Sample ID: FB-1**  
**Date Collected: 05/17/17 10:45**  
**Date Received: 05/18/17 08:33**

**Lab Sample ID: 400-138125-3**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			05/22/17 19:19	1
Fluoride	<0.082		0.20	0.082	mg/L			05/22/17 19:19	1
Sulfate	<0.70		1.0	0.70	mg/L			05/22/17 19:19	1

### 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		05/24/17 10:41	05/24/17 20:43	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/24/17 10:41	05/24/17 20:43	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/24/17 10:41	05/24/17 20:43	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/24/17 10:41	05/24/17 20:43	5
Boron	<0.021		0.050	0.021	mg/L		05/24/17 10:41	05/24/17 20:43	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/24/17 10:41	05/24/17 20:43	5
Calcium	<0.13		0.25	0.13	mg/L		05/24/17 10:41	05/24/17 20:43	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/24/17 10:41	05/24/17 20:43	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/24/17 10:41	05/24/17 20:43	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/24/17 10:41	05/24/17 20:43	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/24/17 10:41	05/24/17 20:43	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/24/17 10:41	05/24/17 20:43	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/24/17 10:41	05/24/17 20:43	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/24/17 10:41	05/24/17 20:43	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		05/23/17 12:54	05/26/17 13:22	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			05/20/17 10:26	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-1  
SDG: Ash Pond

**Client Sample ID: FERB-1**

**Date Collected: 05/17/17 10:50**

**Date Received: 05/18/17 08:33**

**Lab Sample ID: 400-138125-4**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			05/22/17 19:42	1
Fluoride	<0.082		0.20	0.082	mg/L			05/22/17 19:42	1
Sulfate	<0.70		1.0	0.70	mg/L			05/22/17 19:42	1

### 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		05/24/17 10:41	05/24/17 20:48	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/24/17 10:41	05/24/17 20:48	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/24/17 10:41	05/24/17 20:48	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/24/17 10:41	05/24/17 20:48	5
Boron	<0.021		0.050	0.021	mg/L		05/24/17 10:41	05/24/17 20:48	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/24/17 10:41	05/24/17 20:48	5
Calcium	<0.13		0.25	0.13	mg/L		05/24/17 10:41	05/24/17 20:48	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/24/17 10:41	05/24/17 20:48	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/24/17 10:41	05/24/17 20:48	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/24/17 10:41	05/24/17 20:48	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/24/17 10:41	05/24/17 20:48	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/24/17 10:41	05/24/17 20:48	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/24/17 10:41	05/24/17 20:48	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/24/17 10:41	05/24/17 20:48	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		05/23/17 12:54	05/26/17 13:23	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			05/20/17 10:26	1



# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-1  
SDG: Ash Pond

## Qualifiers

### HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

### 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.

## 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 Wansley

TestAmerica Job ID: 400-138125-1  
SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Date Collected: 05/17/17 10:30**

**Date Received: 05/18/17 08:33**

**Lab Sample ID: 400-138125-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	354450	05/22/17 17:48	TAJ	TAL PEN
Total Recoverable	Prep	3005A			354755	05/24/17 10:41	JAP	TAL PEN
Total Recoverable	Analysis	6020		5	354912	05/24/17 20:34	DRE	TAL PEN
Total/NA	Prep	7470A			354618	05/23/17 12:54	JAP	TAL PEN
Total/NA	Analysis	7470A		1	355126	05/26/17 13:18	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	354286	05/20/17 14:57	TET	TAL PEN

**Client Sample ID: DUP-1**

**Date Collected: 05/17/17 00:00**

**Date Received: 05/18/17 08:33**

**Lab Sample ID: 400-138125-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	354450	05/22/17 18:57	TAJ	TAL PEN
Total Recoverable	Prep	3005A			354755	05/24/17 10:41	JAP	TAL PEN
Total Recoverable	Analysis	6020		5	354912	05/24/17 20:39	DRE	TAL PEN
Total/NA	Prep	7470A			354618	05/23/17 12:54	JAP	TAL PEN
Total/NA	Analysis	7470A		1	355126	05/26/17 13:20	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	354286	05/20/17 14:57	TET	TAL PEN

**Client Sample ID: FB-1**

**Date Collected: 05/17/17 10:45**

**Date Received: 05/18/17 08:33**

**Lab Sample ID: 400-138125-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	354450	05/22/17 19:19	TAJ	TAL PEN
Total Recoverable	Prep	3005A			354755	05/24/17 10:41	JAP	TAL PEN
Total Recoverable	Analysis	6020		5	354912	05/24/17 20:43	DRE	TAL PEN
Total/NA	Prep	7470A			354618	05/23/17 12:54	JAP	TAL PEN
Total/NA	Analysis	7470A		1	355126	05/26/17 13:22	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	354287	05/20/17 10:26	TET	TAL PEN

**Client Sample ID: FERB-1**

**Date Collected: 05/17/17 10:50**

**Date Received: 05/18/17 08:33**

**Lab Sample ID: 400-138125-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	354450	05/22/17 19:42	TAJ	TAL PEN
Total Recoverable	Prep	3005A			354755	05/24/17 10:41	JAP	TAL PEN
Total Recoverable	Analysis	6020		5	354912	05/24/17 20:48	DRE	TAL PEN
Total/NA	Prep	7470A			354618	05/23/17 12:54	JAP	TAL PEN
Total/NA	Analysis	7470A		1	355126	05/26/17 13:23	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	354287	05/20/17 10:26	TET	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-1  
SDG: Ash Pond

**Laboratory References:**

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

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# QC Association Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-1  
SDG: Ash Pond

## HPLC/IC

### Analysis Batch: 354450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138125-1	WGWC-14A	Total/NA	Water	300.0	
400-138125-2	DUP-1	Total/NA	Water	300.0	
400-138125-3	FB-1	Total/NA	Water	300.0	
400-138125-4	FERB-1	Total/NA	Water	300.0	
MB 400-354450/4	Method Blank	Total/NA	Water	300.0	
LCS 400-354450/5	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-354450/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-138125-1 MS	WGWC-14A	Total/NA	Water	300.0	
400-138125-1 MSD	WGWC-14A	Total/NA	Water	300.0	

## Metals

### Prep Batch: 354618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138125-1	WGWC-14A	Total/NA	Water	7470A	
400-138125-2	DUP-1	Total/NA	Water	7470A	
400-138125-3	FB-1	Total/NA	Water	7470A	
400-138125-4	FERB-1	Total/NA	Water	7470A	
MB 400-354618/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-354618/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-138111-G-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-138111-G-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

### Prep Batch: 354755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138125-1	WGWC-14A	Total Recoverable	Water	3005A	
400-138125-2	DUP-1	Total Recoverable	Water	3005A	
400-138125-3	FB-1	Total Recoverable	Water	3005A	
400-138125-4	FERB-1	Total Recoverable	Water	3005A	
MB 400-354755/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-354755/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-138087-A-9-C MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-138087-A-9-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Analysis Batch: 354912

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138125-1	WGWC-14A	Total Recoverable	Water	6020	354755
400-138125-2	DUP-1	Total Recoverable	Water	6020	354755
400-138125-3	FB-1	Total Recoverable	Water	6020	354755
400-138125-4	FERB-1	Total Recoverable	Water	6020	354755
MB 400-354755/1-A ^5	Method Blank	Total Recoverable	Water	6020	354755
LCS 400-354755/2-A	Lab Control Sample	Total Recoverable	Water	6020	354755
400-138087-A-9-C MS ^5	Matrix Spike	Total Recoverable	Water	6020	354755
400-138087-A-9-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	354755

### Analysis Batch: 355126

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138125-1	WGWC-14A	Total/NA	Water	7470A	354618
400-138125-2	DUP-1	Total/NA	Water	7470A	354618
400-138125-3	FB-1	Total/NA	Water	7470A	354618

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-1  
SDG: Ash Pond

## Metals (Continued)

### Analysis Batch: 355126 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138125-4	FERB-1	Total/NA	Water	7470A	354618
MB 400-354618/14-A	Method Blank	Total/NA	Water	7470A	354618
LCS 400-354618/15-A	Lab Control Sample	Total/NA	Water	7470A	354618
400-138111-G-1-B MS	Matrix Spike	Total/NA	Water	7470A	354618
400-138111-G-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	354618

## General Chemistry

### Analysis Batch: 354286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138125-1	WGWC-14A	Total/NA	Water	SM 2540C	
400-138125-2	DUP-1	Total/NA	Water	SM 2540C	
MB 400-354286/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-354286/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-138061-A-5 DU	Duplicate	Total/NA	Water	SM 2540C	

### Analysis Batch: 354287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138125-3	FB-1	Total/NA	Water	SM 2540C	
400-138125-4	FERB-1	Total/NA	Water	SM 2540C	
MB 400-354287/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-354287/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-138127-E-3 DU	Duplicate	Total/NA	Water	SM 2540C	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 400-354450/4**  
**Matrix: Water**  
**Analysis Batch: 354450**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			05/22/17 12:29	1
Fluoride	<0.082		0.20	0.082	mg/L			05/22/17 12:29	1
Sulfate	<0.70		1.0	0.70	mg/L			05/22/17 12:29	1

**Lab Sample ID: LCS 400-354450/5**  
**Matrix: Water**  
**Analysis Batch: 354450**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.1		mg/L		101	90 - 110
Fluoride	10.0	10.5		mg/L		105	90 - 110
Sulfate	10.0	10.6		mg/L		106	90 - 110

**Lab Sample ID: LCSD 400-354450/6**  
**Matrix: Water**  
**Analysis Batch: 354450**

**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	10.0	10.2		mg/L		102	90 - 110	1	15
Fluoride	10.0	10.4		mg/L		104	90 - 110	0	15
Sulfate	10.0	10.7		mg/L		107	90 - 110	1	15

**Lab Sample ID: 400-138125-1 MS**  
**Matrix: Water**  
**Analysis Batch: 354450**

**Client Sample ID: WGWC-14A**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	3.9		10.0	15.2		mg/L		112	80 - 120
Fluoride	<0.082		10.0	11.6		mg/L		116	80 - 120
Sulfate	12	F1	10.0	24.4		mg/L		120	80 - 120

**Lab Sample ID: 400-138125-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 354450**

**Client Sample ID: WGWC-14A**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	3.9		10.0	15.2		mg/L		112	80 - 120	0	20
Fluoride	<0.082		10.0	11.7		mg/L		117	80 - 120	0	20
Sulfate	12	F1	10.0	24.5	F1	mg/L		121	80 - 120	0	20

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 400-354755/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 354912**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 354755**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/24/17 10:41	05/24/17 18:59	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/24/17 10:41	05/24/17 18:59	5

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-1  
SDG: Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 400-354755/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 354912**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 354755**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		05/24/17 10:41	05/24/17 18:59	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/24/17 10:41	05/24/17 18:59	5
Boron	0.0226	J	0.050	0.021	mg/L		05/24/17 10:41	05/24/17 18:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/24/17 10:41	05/24/17 18:59	5
Calcium	<0.13		0.25	0.13	mg/L		05/24/17 10:41	05/24/17 18:59	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/24/17 10:41	05/24/17 18:59	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/24/17 10:41	05/24/17 18:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/24/17 10:41	05/24/17 18:59	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/24/17 10:41	05/24/17 18:59	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/24/17 10:41	05/24/17 18:59	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/24/17 10:41	05/24/17 18:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/24/17 10:41	05/24/17 18:59	5

**Lab Sample ID: LCS 400-354755/2-A**  
**Matrix: Water**  
**Analysis Batch: 354912**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 354755**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0564		mg/L		113	80 - 120
Arsenic	0.0500	0.0528		mg/L		106	80 - 120
Barium	0.0500	0.0524		mg/L		105	80 - 120
Beryllium	0.0500	0.0538		mg/L		108	80 - 120
Boron	0.100	0.109		mg/L		109	80 - 120
Cadmium	0.0500	0.0525		mg/L		105	80 - 120
Calcium	5.00	5.21		mg/L		104	80 - 120
Chromium	0.0500	0.0502		mg/L		100	80 - 120
Cobalt	0.0500	0.0503		mg/L		101	80 - 120
Lead	0.0500	0.0522		mg/L		104	80 - 120
Lithium	0.0500	0.0506		mg/L		101	80 - 120
Molybdenum	0.100	0.102		mg/L		102	80 - 120
Selenium	0.0500	0.0523		mg/L		105	80 - 120
Thallium	0.0100	0.0103		mg/L		103	80 - 120

**Lab Sample ID: 400-138087-A-9-C MS ^5**  
**Matrix: Water**  
**Analysis Batch: 354912**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 354755**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0584		mg/L		117	75 - 125
Arsenic	<0.00046		0.0500	0.0534		mg/L		107	75 - 125
Barium	0.065		0.0500	0.118		mg/L		107	75 - 125
Beryllium	<0.00034		0.0500	0.0557		mg/L		111	75 - 125
Boron	<0.021		0.100	0.119		mg/L		119	75 - 125
Cadmium	<0.00034		0.0500	0.0526		mg/L		105	75 - 125
Calcium	5.8		5.00	11.0		mg/L		103	75 - 125
Chromium	0.0020	J	0.0500	0.0517		mg/L		100	75 - 125
Cobalt	0.0011	J	0.0500	0.0525		mg/L		103	75 - 125
Lead	0.00060	J	0.0500	0.0518		mg/L		102	75 - 125
Lithium	0.0095		0.0500	0.0569		mg/L		95	75 - 125

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-1  
SDG: Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 400-138087-A-9-C MS ^5**  
**Matrix: Water**  
**Analysis Batch: 354912**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 354755**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	<0.00085		0.100	0.104		mg/L		104	75 - 125
Selenium	0.00026	J	0.0500	0.0555		mg/L		111	75 - 125
Thallium	<0.000085		0.0100	0.0104		mg/L		104	75 - 125

**Lab Sample ID: 400-138087-A-9-D MSD ^5**  
**Matrix: Water**  
**Analysis Batch: 354912**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 354755**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0566		mg/L		113	75 - 125	3	20
Arsenic	<0.00046		0.0500	0.0538		mg/L		108	75 - 125	1	20
Barium	0.065		0.0500	0.120		mg/L		110	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0560		mg/L		112	75 - 125	1	20
Boron	<0.021		0.100	0.117		mg/L		117	75 - 125	2	20
Cadmium	<0.00034		0.0500	0.0535		mg/L		107	75 - 125	2	20
Calcium	5.8		5.00	11.2		mg/L		108	75 - 125	2	20
Chromium	0.0020	J	0.0500	0.0523		mg/L		101	75 - 125	1	20
Cobalt	0.0011	J	0.0500	0.0527		mg/L		103	75 - 125	0	20
Lead	0.00060	J	0.0500	0.0524		mg/L		104	75 - 125	1	20
Lithium	0.0095		0.0500	0.0575		mg/L		96	75 - 125	1	20
Molybdenum	<0.00085		0.100	0.103		mg/L		103	75 - 125	1	20
Selenium	0.00026	J	0.0500	0.0545		mg/L		108	75 - 125	2	20
Thallium	<0.000085		0.0100	0.0105		mg/L		105	75 - 125	1	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 400-354618/14-A**  
**Matrix: Water**  
**Analysis Batch: 355126**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 354618**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		05/23/17 12:22	05/26/17 12:30	1

**Lab Sample ID: LCS 400-354618/15-A**  
**Matrix: Water**  
**Analysis Batch: 355126**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 354618**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.000922		mg/L		92	80 - 120

**Lab Sample ID: 400-138111-G-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 355126**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 354618**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000070		0.00201	0.00190		mg/L		94	80 - 120

TestAmerica Pensacola



# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-1  
SDG: Ash Pond

## Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID: 400-138111-G-1-C MSD**  
**Matrix: Water**  
**Analysis Batch: 355126**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 354618**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070		0.00201	0.00186		mg/L		93	80 - 120	2	20

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 400-354286/1**  
**Matrix: Water**  
**Analysis Batch: 354286**

**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			05/20/17 14:57	1

**Lab Sample ID: LCS 400-354286/2**  
**Matrix: Water**  
**Analysis Batch: 354286**

**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	288		mg/L		98	78 - 122

**Lab Sample ID: 400-138061-A-5 DU**  
**Matrix: Water**  
**Analysis Batch: 354286**

**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	750		746		mg/L		0	5

**Lab Sample ID: MB 400-354287/1**  
**Matrix: Water**  
**Analysis Batch: 354287**

**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			05/20/17 10:26	1

**Lab Sample ID: LCS 400-354287/2**  
**Matrix: Water**  
**Analysis Batch: 354287**

**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	258		mg/L		88	78 - 122

**Lab Sample ID: 400-138127-E-3 DU**  
**Matrix: Water**  
**Analysis Batch: 354287**

**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	84		86.0		mg/L		2	5



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-138125-1

SDG Number: Ash Pond

**Login Number: 138125**

**List Number: 1**

**Creator: Siddoway, Benjamin**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.3°C, 4.5°C, 5.8°C IR-2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Accreditation/Certification Summary

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-1  
 SDG: Ash Pond

## Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	06-30-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17 *
West Virginia DEP	State Program	3	136	06-30-17

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-138125-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR - Plant Wansley

For:

Southern Company

Southern Accounts Payable-SCS

PO BOX 830749

Birmingham, Alabama 35283

Attn: Accounts Payable



Authorized for release by:

6/19/2017 3:49:19 PM

Cheyenne Whitmire, Project Manager II

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### LINKS

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-2  
SDG: Ash Pond

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**Job ID: 400-138125-2**

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**Laboratory: TestAmerica Pensacola**

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**Narrative**

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**Job Narrative  
400-138125-2**

**RAD**

Method(s) PrecSep\_0: Radium 228 Prep Batch 160-310667. 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. WGWC-14A (400-138125-1), DUP-1 (400-138125-2), FB-1 (400-138125-3) and FERB-1 (400-138125-4)

Method(s) PrecSep-21: Radium 226 Prep Batch 160-310292. 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. WGWC-14A (400-138125-1), DUP-1 (400-138125-2), FB-1 (400-138125-3) and FERB-1 (400-138125-4)



# Method Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-2  
SDG: Ash Pond

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 Wansley

TestAmerica Job ID: 400-138125-2  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-138125-1	WGWC-14A	Water	05/17/17 10:30	05/18/17 08:33
400-138125-2	DUP-1	Water	05/17/17 00:00	05/18/17 08:33
400-138125-3	FB-1	Water	05/17/17 10:45	05/18/17 08:33
400-138125-4	FERB-1	Water	05/17/17 10:50	05/18/17 08:33

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# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-2  
 SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Lab Sample ID: 400-138125-1**

Date Collected: 05/17/17 10:30

Matrix: Water

Date Received: 05/18/17 08:33

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.337		0.115	0.119	1.00	0.103	pCi/L	05/24/17 12:06	06/16/17 10:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/24/17 12:06	06/16/17 10:41	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.295	U	0.194	0.196	1.00	0.297	pCi/L	05/25/17 12:35	06/08/17 14:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/25/17 12:35	06/08/17 14:37	1
Y Carrier	93.8		40 - 110					05/25/17 12:35	06/08/17 14:37	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.632		0.225	0.229	5.00	0.297	pCi/L		06/18/17 13:14	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-2  
 SDG: Ash Pond

**Client Sample ID: DUP-1**  
**Date Collected: 05/17/17 00:00**  
**Date Received: 05/18/17 08:33**

**Lab Sample ID: 400-138125-2**  
**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	0.513		0.134	0.141	1.00	0.100	pCi/L	05/24/17 12:06	06/16/17 10:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					05/24/17 12:06	06/16/17 10:41	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.215	U	0.188	0.189	1.00	0.299	pCi/L	05/25/17 12:35	06/08/17 14:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					05/25/17 12:35	06/08/17 14:37	1
Y Carrier	87.1		40 - 110					05/25/17 12:35	06/08/17 14:37	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.728		0.231	0.236	5.00	0.299	pCi/L		06/18/17 13:14	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-2  
 SDG: Ash Pond

**Client Sample ID: FB-1**  
**Date Collected: 05/17/17 10:45**  
**Date Received: 05/18/17 08:33**

**Lab Sample ID: 400-138125-3**  
**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	0.0252	U	0.0653	0.0654	1.00	0.119	pCi/L	05/24/17 12:06	06/16/17 10:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					05/24/17 12:06	06/16/17 10:41	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.00873	U	0.146	0.146	1.00	0.268	pCi/L	05/25/17 12:35	06/08/17 14:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					05/25/17 12:35	06/08/17 14:37	1
Y Carrier	91.6		40 - 110					05/25/17 12:35	06/08/17 14:37	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0165	U	0.160	0.160	5.00	0.268	pCi/L		06/18/17 13:14	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-2  
 SDG: Ash Pond

**Client Sample ID: FERB-1**

**Lab Sample ID: 400-138125-4**

**Date Collected: 05/17/17 10:50**

**Matrix: Water**

**Date Received: 05/18/17 08:33**

### Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0113	U	0.0439	0.0440	1.00	0.0872	pCi/L	05/24/17 12:06	06/16/17 10:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	109		40 - 110					05/24/17 12:06	06/16/17 10:43	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.189	U	0.181	0.182	1.00	0.292	pCi/L	05/25/17 12:35	06/08/17 14:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	109		40 - 110					05/25/17 12:35	06/08/17 14:37	1
Y Carrier	88.2		40 - 110					05/25/17 12:35	06/08/17 14:37	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.200	U	0.186	0.187	5.00	0.292	pCi/L		06/18/17 13:14	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-2  
SDG: Ash Pond

## Qualifiers

### Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-2  
SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Date Collected: 05/17/17 10:30**

**Date Received: 05/18/17 08:33**

**Lab Sample ID: 400-138125-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			310292	05/24/17 12:06	LDE	TAL SL
Total/NA	Analysis	9315		1	313776	06/16/17 10:41	RTM	TAL SL
Total/NA	Prep	PrecSep_0			310667	05/25/17 12:35	LDE	TAL SL
Total/NA	Analysis	9320		1	312379	06/08/17 14:37	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	313879	06/18/17 13:14	RTM	TAL SL

**Client Sample ID: DUP-1**

**Date Collected: 05/17/17 00:00**

**Date Received: 05/18/17 08:33**

**Lab Sample ID: 400-138125-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			310292	05/24/17 12:06	LDE	TAL SL
Total/NA	Analysis	9315		1	313776	06/16/17 10:41	RTM	TAL SL
Total/NA	Prep	PrecSep_0			310667	05/25/17 12:35	LDE	TAL SL
Total/NA	Analysis	9320		1	312379	06/08/17 14:37	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	313879	06/18/17 13:14	RTM	TAL SL

**Client Sample ID: FB-1**

**Date Collected: 05/17/17 10:45**

**Date Received: 05/18/17 08:33**

**Lab Sample ID: 400-138125-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			310292	05/24/17 12:06	LDE	TAL SL
Total/NA	Analysis	9315		1	313776	06/16/17 10:41	RTM	TAL SL
Total/NA	Prep	PrecSep_0			310667	05/25/17 12:35	LDE	TAL SL
Total/NA	Analysis	9320		1	312379	06/08/17 14:37	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	313879	06/18/17 13:14	RTM	TAL SL

**Client Sample ID: FERB-1**

**Date Collected: 05/17/17 10:50**

**Date Received: 05/18/17 08:33**

**Lab Sample ID: 400-138125-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			310292	05/24/17 12:06	LDE	TAL SL
Total/NA	Analysis	9315		1	313773	06/16/17 10:43	RTM	TAL SL
Total/NA	Prep	PrecSep_0			310667	05/25/17 12:35	LDE	TAL SL
Total/NA	Analysis	9320		1	312379	06/08/17 14:37	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	313879	06/18/17 13:14	RTM	TAL SL

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# QC Association Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-2  
SDG: Ash Pond

## Rad

### Prep Batch: 310292

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138125-1	WGWC-14A	Total/NA	Water	PrecSep-21	
400-138125-2	DUP-1	Total/NA	Water	PrecSep-21	
400-138125-3	FB-1	Total/NA	Water	PrecSep-21	
400-138125-4	FERB-1	Total/NA	Water	PrecSep-21	
MB 160-310292/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-310292/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-310292/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 310667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-138125-1	WGWC-14A	Total/NA	Water	PrecSep_0	
400-138125-2	DUP-1	Total/NA	Water	PrecSep_0	
400-138125-3	FB-1	Total/NA	Water	PrecSep_0	
400-138125-4	FERB-1	Total/NA	Water	PrecSep_0	
MB 160-310667/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-310667/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-310667/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	



# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-2  
SDG: Ash Pond

## Method: 9315 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-310292/1-A**  
**Matrix: Water**  
**Analysis Batch: 313771**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 310292**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.01806	U	0.0530	0.0530	1.00	0.103	pCi/L	05/24/17 12:06	06/16/17 10:11	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					05/24/17 12:06	06/16/17 10:11	1

**Lab Sample ID: LCS 160-310292/2-A**  
**Matrix: Water**  
**Analysis Batch: 313771**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 310292**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	15.1	11.08		1.18	1.00	0.0880	pCi/L	73	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	107		40 - 110						

**Lab Sample ID: LCSD 160-310292/3-A**  
**Matrix: Water**  
**Analysis Batch: 313776**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 310292**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	15.1	12.79		1.36	1.00	0.132	pCi/L	84	68 - 137	0.67	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	105		40 - 110								

## Method: 9320 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-310667/1-A**  
**Matrix: Water**  
**Analysis Batch: 312380**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 310667**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2796	U	0.278	0.279	1.00	0.451	pCi/L	05/25/17 12:35	06/08/17 14:34	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					05/25/17 12:35	06/08/17 14:34	1
Y Carrier	85.2		40 - 110					05/25/17 12:35	06/08/17 14:34	1

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-2  
SDG: Ash Pond

## Method: 9320 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-310667/2-A**  
**Matrix: Water**  
**Analysis Batch: 312380**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 310667**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	17.8	16.29		1.76	1.00	0.425	pCi/L	92	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	107		40 - 110
Y Carrier	88.6		40 - 110

**Lab Sample ID: LCSD 160-310667/3-A**  
**Matrix: Water**  
**Analysis Batch: 312380**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 310667**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	17.8	16.09		1.74	1.00	0.442	pCi/L	90	56 - 140	0.06	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	105		40 - 110
Y Carrier	90.1		40 - 110


## Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

**Lab Sample ID: 400-137927-A-2 DU**  
**Matrix: Water**  
**Analysis Batch: 313879**

**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	0.148	U	0.3421	U	0.323	5.00	0.512	pCi/L	0.31	

Chain of Custody Record

<b>Client Information</b> Client Contact: Joju Abraham Company: Southern Company Address: 2411 Ralph McGill Blvd SE B10185 City: Atlanta State: GA, Zip: 30308 Phone: _____ Email: JAbraham@southernco.com Project Name: CCR Plant Wansley Site: AP		Lab PM: Whitmore, Cheyenne R. E-Mail: cheyenne.whitmore@testamericainc.com Carrier Tracking No(s): _____ COC No: 400-60011-24706 Page: _____ Job #: 400-138125	
Due Date Requested: _____ TAT Requested (days): _____ PO #: _____ WO #: _____ Project #: _____ SSOW#: _____		<b>Analysis Requested</b>  400-138125 COC 9315_Ra226_9320_Ra228_Ra226Ra228_GPC 6020-Sb,As,Ba,Bi,Be,Ca,Cd,Cr,Cu,Pb,LI,Mo,Se,Tl,7470A-Hg 2540C-TDS, 300_ORGFM_28D-Chloride,Fluoride,Sulfate	
<b>Sample Identification</b> WGWC-14A DUP-1 FB-1 FBFB-1		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No Total Number of Containers: _____ Special Instructions/Note: _____	
<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant Deliverable Requested: I, II, III, IV, Other (specify) _____		<b>Sample Disposal</b> (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
<b>Empty Kit Relinquished by:</b> _____ Relinquished by: _____ Relinquished by: _____ Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		<b>Method of Shipment:</b> _____ Received by: _____ Received by: _____ Received by: _____ Cooler Temperature(s) °C and Other Remarks: 5.3, u.s., 5.8°C	



## Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-138061-2  
SDG Number: Gypsum Storage Area

**Login Number: 138061**

**List Number: 1**

**Creator: Siddoway, Benjamin**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C, 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 Wansley

TestAmerica Job ID: 400-138125-2  
SDG: Ash Pond

## 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	06-30-18
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

## Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-17 *
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-17 *
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17 *
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17 *
Nevada	State Program	9	MO000542017-1	07-31-17 *
New Jersey	NELAP	2	MO002	06-30-17 *
New York	NELAP	2	11616	03-31-18

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Pensacola

# Accreditation/Certification Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-138125-2  
SDG: Ash Pond

## 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: 400-139124-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR - Plant Wansley

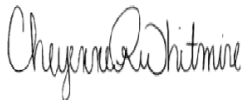
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Joju Abraham



Authorized for release by:

6/29/2017 4:49:23 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-1  
SDG: Ash Pond

**Job ID: 400-139124-1**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-139124-1

#### Metals

Method(s) 6020: The matrix spike (MS) recoveries for preparation batch 357477 and analytical batch 400-357648 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 6020: The continuing calibration verification (CCV) associated with batch 357648 recovered above the upper control limit for Selenium. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: WGWC-14A (400-139124-1), WGWC-19 (400-139124-2), FB-1 (400-139124-3), FERB-1 (400-139124-4) and DUP-1 (400-139124-5).

Method(s) 7470A: The matrix spike duplicate (MSD) recoveries for prep batch 356635 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.



# Detection Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-1  
SDG: Ash Pond

## Client Sample ID: WGWC-14A

## Lab Sample ID: 400-139124-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.2		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	8.1		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0021		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.060		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	5.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.010		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0010	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	72		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-19

## Lab Sample ID: 400-139124-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.5		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.35		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	3.8		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.0014	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	9.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.047		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0015	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	74		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FB-1

## Lab Sample ID: 400-139124-3

No Detections.

## Client Sample ID: FERB-1

## Lab Sample ID: 400-139124-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	0.16	J	0.25	0.13	mg/L	5		6020	Total Recoverable

## Client Sample ID: DUP-1

## Lab Sample ID: 400-139124-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.2		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	8.1		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0020		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.058		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	5.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0097		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	98		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Method Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-1  
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN

#### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 Wansley

TestAmerica Job ID: 400-139124-1  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-139124-1	WGWC-14A	Water	06/07/17 14:45	06/10/17 08:18
400-139124-2	WGWC-19	Water	06/07/17 16:25	06/10/17 08:18
400-139124-3	FB-1	Water	06/08/17 08:35	06/10/17 08:18
400-139124-4	FERB-1	Water	06/08/17 08:30	06/10/17 08:18
400-139124-5	DUP-1	Water	06/07/17 00:00	06/10/17 08:18

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# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-1  
 SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Lab Sample ID: 400-139124-1**

**Date Collected: 06/07/17 14:45**

**Matrix: Water**

**Date Received: 06/10/17 08:18**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.2</b>		1.0	0.89	mg/L			06/17/17 14:24	1
Fluoride	<0.082		0.20	0.082	mg/L			06/17/17 14:24	1
<b>Sulfate</b>	<b>8.1</b>		1.0	0.70	mg/L			06/17/17 14:24	1

### 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		06/19/17 10:27	06/19/17 18:38	5
<b>Arsenic</b>	<b>0.0021</b>		0.0013	0.00046	mg/L		06/19/17 10:27	06/19/17 18:38	5
<b>Barium</b>	<b>0.060</b>		0.0025	0.00049	mg/L		06/19/17 10:27	06/19/17 18:38	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/19/17 10:27	06/19/17 18:38	5
Boron	<0.021		0.050	0.021	mg/L		06/19/17 10:27	06/19/17 18:38	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/19/17 10:27	06/19/17 18:38	5
<b>Calcium</b>	<b>5.2</b>		0.25	0.13	mg/L		06/19/17 10:27	06/19/17 18:38	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/19/17 10:27	06/19/17 18:38	5
<b>Cobalt</b>	<b>0.010</b>		0.0025	0.00040	mg/L		06/19/17 10:27	06/19/17 18:38	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/19/17 10:27	06/19/17 18:38	5
Lithium	<0.0032		0.0050	0.0032	mg/L		06/19/17 10:27	06/19/17 18:38	5
<b>Molybdenum</b>	<b>0.0010</b>	<b>J</b>	0.015	0.00085	mg/L		06/19/17 10:27	06/19/17 18:38	5
Selenium	<0.00024	<b>^</b>	0.0013	0.00024	mg/L		06/19/17 10:27	06/19/17 18:38	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/19/17 10:27	06/19/17 18:38	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		06/12/17 10:51	06/13/17 14:00	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>72</b>		5.0	3.4	mg/L			06/13/17 14:15	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-1  
 SDG: Ash Pond

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-139124-2**

**Date Collected: 06/07/17 16:25**

**Matrix: Water**

**Date Received: 06/10/17 08:18**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.5		1.0	0.89	mg/L			06/16/17 06:36	1
Fluoride	0.35		0.20	0.082	mg/L			06/16/17 06:36	1
Sulfate	3.8		1.0	0.70	mg/L			06/16/17 06:36	1

**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		06/19/17 10:27	06/19/17 18:34	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		06/19/17 10:27	06/19/17 18:34	5
Barium	0.0014	J	0.0025	0.00049	mg/L		06/19/17 10:27	06/19/17 18:34	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/19/17 10:27	06/19/17 18:34	5
Boron	<0.021		0.050	0.021	mg/L		06/19/17 10:27	06/19/17 18:34	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/19/17 10:27	06/19/17 18:34	5
Calcium	9.0		0.25	0.13	mg/L		06/19/17 10:27	06/19/17 18:34	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/19/17 10:27	06/19/17 18:34	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		06/19/17 10:27	06/19/17 18:34	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/19/17 10:27	06/19/17 18:34	5
Lithium	0.047		0.0050	0.0032	mg/L		06/19/17 10:27	06/19/17 18:34	5
Molybdenum	0.0015	J	0.015	0.00085	mg/L		06/19/17 10:27	06/19/17 18:34	5
Selenium	<0.00024	^	0.0013	0.00024	mg/L		06/19/17 10:27	06/19/17 18:34	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/19/17 10:27	06/19/17 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		06/12/17 10:51	06/13/17 14:07	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	74		5.0	3.4	mg/L			06/13/17 14:15	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-1  
SDG: Ash Pond

**Client Sample ID: FB-1**  
**Date Collected: 06/08/17 08:35**  
**Date Received: 06/10/17 08:18**

**Lab Sample ID: 400-139124-3**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			06/16/17 06:59	1
Fluoride	<0.082		0.20	0.082	mg/L			06/16/17 06:59	1
Sulfate	<0.70		1.0	0.70	mg/L			06/16/17 06:59	1

### 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		06/19/17 10:27	06/19/17 18:11	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		06/19/17 10:27	06/19/17 18:11	5
Barium	<0.00049		0.0025	0.00049	mg/L		06/19/17 10:27	06/19/17 18:11	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/19/17 10:27	06/19/17 18:11	5
Boron	<0.021		0.050	0.021	mg/L		06/19/17 10:27	06/19/17 18:11	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/19/17 10:27	06/19/17 18:11	5
Calcium	<0.13		0.25	0.13	mg/L		06/19/17 10:27	06/19/17 18:11	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/19/17 10:27	06/19/17 18:11	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		06/19/17 10:27	06/19/17 18:11	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/19/17 10:27	06/19/17 18:11	5
Lithium	<0.0032		0.0050	0.0032	mg/L		06/19/17 10:27	06/19/17 18:11	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		06/19/17 10:27	06/19/17 18:11	5
Selenium	<0.00024 ^		0.0013	0.00024	mg/L		06/19/17 10:27	06/19/17 18:11	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/19/17 10:27	06/19/17 18:11	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		06/12/17 10:51	06/13/17 14:09	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			06/13/17 14:15	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-1  
SDG: Ash Pond

**Client Sample ID: FERB-1**  
**Date Collected: 06/08/17 08:30**  
**Date Received: 06/10/17 08:18**

**Lab Sample ID: 400-139124-4**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			06/16/17 07:22	1
Fluoride	<0.082		0.20	0.082	mg/L			06/16/17 07:22	1
Sulfate	<0.70		1.0	0.70	mg/L			06/16/17 07:22	1

### 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		06/19/17 10:27	06/19/17 18:07	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		06/19/17 10:27	06/19/17 18:07	5
Barium	<0.00049		0.0025	0.00049	mg/L		06/19/17 10:27	06/19/17 18:07	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/19/17 10:27	06/19/17 18:07	5
Boron	<0.021		0.050	0.021	mg/L		06/19/17 10:27	06/19/17 18:07	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/19/17 10:27	06/19/17 18:07	5
Calcium	<b>0.16</b>	<b>J</b>	0.25	0.13	mg/L		06/19/17 10:27	06/19/17 18:07	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/19/17 10:27	06/19/17 18:07	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		06/19/17 10:27	06/19/17 18:07	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/19/17 10:27	06/19/17 18:07	5
Lithium	<0.0032		0.0050	0.0032	mg/L		06/19/17 10:27	06/19/17 18:07	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		06/19/17 10:27	06/19/17 18:07	5
Selenium	<0.00024	<b>^</b>	0.0013	0.00024	mg/L		06/19/17 10:27	06/19/17 18:07	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/19/17 10:27	06/19/17 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		06/12/17 10:51	06/13/17 15:08	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			06/13/17 14:15	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-1  
SDG: Ash Pond

**Client Sample ID: DUP-1**

**Date Collected: 06/07/17 00:00**

**Date Received: 06/10/17 08:18**

**Lab Sample ID: 400-139124-5**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.2</b>		1.0	0.89	mg/L			06/16/17 07:45	1
Fluoride	<0.082		0.20	0.082	mg/L			06/16/17 07:45	1
<b>Sulfate</b>	<b>8.1</b>		1.0	0.70	mg/L			06/16/17 07:45	1

### 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		06/19/17 10:27	06/19/17 18:02	5
<b>Arsenic</b>	<b>0.0020</b>		0.0013	0.00046	mg/L		06/19/17 10:27	06/19/17 18:02	5
<b>Barium</b>	<b>0.058</b>		0.0025	0.00049	mg/L		06/19/17 10:27	06/19/17 18:02	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/19/17 10:27	06/19/17 18:02	5
Boron	<0.021		0.050	0.021	mg/L		06/19/17 10:27	06/19/17 18:02	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/19/17 10:27	06/19/17 18:02	5
<b>Calcium</b>	<b>5.2</b>		0.25	0.13	mg/L		06/19/17 10:27	06/19/17 18:02	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/19/17 10:27	06/19/17 18:02	5
<b>Cobalt</b>	<b>0.0097</b>		0.0025	0.00040	mg/L		06/19/17 10:27	06/19/17 18:02	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/19/17 10:27	06/19/17 18:02	5
Lithium	<0.0032		0.0050	0.0032	mg/L		06/19/17 10:27	06/19/17 18:02	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		06/19/17 10:27	06/19/17 18:02	5
Selenium	<0.00024 ^		0.0013	0.00024	mg/L		06/19/17 10:27	06/19/17 18:02	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/19/17 10:27	06/19/17 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		06/12/17 10:51	06/13/17 15:10	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>98</b>		5.0	3.4	mg/L			06/13/17 14:15	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-1  
SDG: Ash Pond

## Qualifiers

### Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-1  
SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Date Collected: 06/07/17 14:45**

**Date Received: 06/10/17 08:18**

**Lab Sample ID: 400-139124-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	357418	06/17/17 14:24	TAJ	TAL PEN
Total Recoverable	Prep	3005A			357477	06/19/17 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	357648	06/19/17 18:38	DRE	TAL PEN
Total/NA	Prep	7470A			356635	06/12/17 10:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	356836	06/13/17 14:00	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	356789	06/13/17 14:15	TET	TAL PEN

**Client Sample ID: WGWC-19**

**Date Collected: 06/07/17 16:25**

**Date Received: 06/10/17 08:18**

**Lab Sample ID: 400-139124-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	357215	06/16/17 06:36	KH1	TAL PEN
Total Recoverable	Prep	3005A			357477	06/19/17 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	357648	06/19/17 18:34	DRE	TAL PEN
Total/NA	Prep	7470A			356635	06/12/17 10:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	356836	06/13/17 14:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	356789	06/13/17 14:15	TET	TAL PEN

**Client Sample ID: FB-1**

**Date Collected: 06/08/17 08:35**

**Date Received: 06/10/17 08:18**

**Lab Sample ID: 400-139124-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	357215	06/16/17 06:59	KH1	TAL PEN
Total Recoverable	Prep	3005A			357477	06/19/17 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	357648	06/19/17 18:11	DRE	TAL PEN
Total/NA	Prep	7470A			356635	06/12/17 10:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	356836	06/13/17 14:09	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	356789	06/13/17 14:15	TET	TAL PEN

**Client Sample ID: FERB-1**

**Date Collected: 06/08/17 08:30**

**Date Received: 06/10/17 08:18**

**Lab Sample ID: 400-139124-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	357215	06/16/17 07:22	KH1	TAL PEN
Total Recoverable	Prep	3005A			357477	06/19/17 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	357648	06/19/17 18:07	DRE	TAL PEN
Total/NA	Prep	7470A			356635	06/12/17 10:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	356836	06/13/17 15:08	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	356789	06/13/17 14:15	TET	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-1  
SDG: Ash Pond

**Client Sample ID: DUP-1**

**Lab Sample ID: 400-139124-5**

**Date Collected: 06/07/17 00:00**

**Matrix: Water**

**Date Received: 06/10/17 08:18**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	357215	06/16/17 07:45	KH1	TAL PEN
Total Recoverable	Prep	3005A			357477	06/19/17 10:27	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	357648	06/19/17 18:02	DRE	TAL PEN
Total/NA	Prep	7470A			356635	06/12/17 10:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	356836	06/13/17 15:10	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	356789	06/13/17 14:15	TET	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 Wansley

TestAmerica Job ID: 400-139124-1  
SDG: Ash Pond

## HPLC/IC

### Analysis Batch: 357215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-139124-2	WGWC-19	Total/NA	Water	300.0	
400-139124-3	FB-1	Total/NA	Water	300.0	
400-139124-4	FERB-1	Total/NA	Water	300.0	
400-139124-5	DUP-1	Total/NA	Water	300.0	
MB 400-357215/4	Method Blank	Total/NA	Water	300.0	
LCS 400-357215/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-357215/6	Lab Control Sample Dup	Total/NA	Water	300.0	
680-139702-C-9 MS	Matrix Spike	Total/NA	Water	300.0	
680-139702-C-9 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 357418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-139124-1	WGWC-14A	Total/NA	Water	300.0	
MB 400-357418/5	Method Blank	Total/NA	Water	300.0	
LCS 400-357418/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-357418/7	Lab Control Sample Dup	Total/NA	Water	300.0	
400-139124-1 MS	WGWC-14A	Total/NA	Water	300.0	
400-139124-1 MSD	WGWC-14A	Total/NA	Water	300.0	

## Metals

### Prep Batch: 356635

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-139124-1	WGWC-14A	Total/NA	Water	7470A	
400-139124-2	WGWC-19	Total/NA	Water	7470A	
400-139124-3	FB-1	Total/NA	Water	7470A	
400-139124-4	FERB-1	Total/NA	Water	7470A	
400-139124-5	DUP-1	Total/NA	Water	7470A	
MB 400-356635/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-356635/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-139124-1 MS	WGWC-14A	Total/NA	Water	7470A	
400-139124-1 MSD	WGWC-14A	Total/NA	Water	7470A	

### Analysis Batch: 356836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-139124-1	WGWC-14A	Total/NA	Water	7470A	356635
400-139124-2	WGWC-19	Total/NA	Water	7470A	356635
400-139124-3	FB-1	Total/NA	Water	7470A	356635
400-139124-4	FERB-1	Total/NA	Water	7470A	356635
400-139124-5	DUP-1	Total/NA	Water	7470A	356635
MB 400-356635/14-A	Method Blank	Total/NA	Water	7470A	356635
LCS 400-356635/15-A	Lab Control Sample	Total/NA	Water	7470A	356635
400-139124-1 MS	WGWC-14A	Total/NA	Water	7470A	356635
400-139124-1 MSD	WGWC-14A	Total/NA	Water	7470A	356635

### Prep Batch: 357477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-139124-1	WGWC-14A	Total Recoverable	Water	3005A	
400-139124-2	WGWC-19	Total Recoverable	Water	3005A	
400-139124-3	FB-1	Total Recoverable	Water	3005A	

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-1  
SDG: Ash Pond

## Metals (Continued)

### Prep Batch: 357477 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-139124-4	FERB-1	Total Recoverable	Water	3005A	
400-139124-5	DUP-1	Total Recoverable	Water	3005A	
MB 400-357477/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-357477/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-139121-G-1-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-139121-G-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Analysis Batch: 357648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-139124-1	WGWC-14A	Total Recoverable	Water	6020	357477
400-139124-2	WGWC-19	Total Recoverable	Water	6020	357477
400-139124-3	FB-1	Total Recoverable	Water	6020	357477
400-139124-4	FERB-1	Total Recoverable	Water	6020	357477
400-139124-5	DUP-1	Total Recoverable	Water	6020	357477
MB 400-357477/1-A ^5	Method Blank	Total Recoverable	Water	6020	357477
LCS 400-357477/2-A	Lab Control Sample	Total Recoverable	Water	6020	357477
400-139121-G-1-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	357477
400-139121-G-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	357477

## General Chemistry

### Analysis Batch: 356789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-139124-1	WGWC-14A	Total/NA	Water	SM 2540C	
400-139124-2	WGWC-19	Total/NA	Water	SM 2540C	
400-139124-3	FB-1	Total/NA	Water	SM 2540C	
400-139124-4	FERB-1	Total/NA	Water	SM 2540C	
400-139124-5	DUP-1	Total/NA	Water	SM 2540C	
MB 400-356789/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-356789/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-139124-1 DU	WGWC-14A	Total/NA	Water	SM 2540C	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 400-357215/4**  
**Matrix: Water**  
**Analysis Batch: 357215**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			06/16/17 00:31	1
Fluoride	<0.082		0.20	0.082	mg/L			06/16/17 00:31	1
Sulfate	<0.70		1.0	0.70	mg/L			06/16/17 00:31	1

**Lab Sample ID: LCS 400-357215/5**  
**Matrix: Water**  
**Analysis Batch: 357215**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.90		mg/L		99	90 - 110
Fluoride	10.0	10.2		mg/L		102	90 - 110
Sulfate	10.0	10.3		mg/L		103	90 - 110

**Lab Sample ID: LCSD 400-357215/6**  
**Matrix: Water**  
**Analysis Batch: 357215**

**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	10.0	9.90		mg/L		99	90 - 110	0	15
Fluoride	10.0	10.2		mg/L		102	90 - 110	0	15
Sulfate	10.0	10.3		mg/L		103	90 - 110	0	15

**Lab Sample ID: 680-139702-C-9 MS**  
**Matrix: Water**  
**Analysis Batch: 357215**

**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	5.6		50.0	54.1		mg/L		97	80 - 120
Fluoride	<0.41		50.0	51.7		mg/L		103	80 - 120
Sulfate	150		50.0	195		mg/L		98	80 - 120

**Lab Sample ID: 680-139702-C-9 MSD**  
**Matrix: Water**  
**Analysis Batch: 357215**

**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	5.6		50.0	54.1		mg/L		97	80 - 120	0	20
Fluoride	<0.41		50.0	51.6		mg/L		103	80 - 120	0	20
Sulfate	150		50.0	196		mg/L		99	80 - 120	0	20

**Lab Sample ID: MB 400-357418/5**  
**Matrix: Water**  
**Analysis Batch: 357418**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			06/17/17 13:16	1
Fluoride	<0.082		0.20	0.082	mg/L			06/17/17 13:16	1
Sulfate	<0.70		1.0	0.70	mg/L			06/17/17 13:16	1

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 400-357418/6**  
**Matrix: Water**  
**Analysis Batch: 357418**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.83		mg/L		98	90 - 110
Fluoride	10.0	10.4		mg/L		104	90 - 110
Sulfate	10.0	10.2		mg/L		102	90 - 110

**Lab Sample ID: LCSD 400-357418/7**  
**Matrix: Water**  
**Analysis Batch: 357418**

**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	10.0	9.83		mg/L		98	90 - 110	0	15
Fluoride	10.0	10.2		mg/L		102	90 - 110	1	15
Sulfate	10.0	10.2		mg/L		102	90 - 110	0	15

**Lab Sample ID: 400-139124-1 MS**  
**Matrix: Water**  
**Analysis Batch: 357418**

**Client Sample ID: WGWC-14A**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	3.2		10.0	12.8		mg/L		95	80 - 120
Fluoride	<0.082		10.0	10.1		mg/L		101	80 - 120
Sulfate	8.1		10.0	17.9		mg/L		98	80 - 120

**Lab Sample ID: 400-139124-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 357418**

**Client Sample ID: WGWC-14A**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	3.2		10.0	12.7		mg/L		95	80 - 120	0	20
Fluoride	<0.082		10.0	10.1		mg/L		101	80 - 120	1	20
Sulfate	8.1		10.0	17.8		mg/L		97	80 - 120	0	20

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 400-357477/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 357648**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 357477**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		06/19/17 10:27	06/19/17 16:28	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		06/19/17 10:27	06/19/17 16:28	5
Barium	<0.00049		0.0025	0.00049	mg/L		06/19/17 10:27	06/19/17 16:28	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		06/19/17 10:27	06/19/17 16:28	5
Boron	<0.021		0.050	0.021	mg/L		06/19/17 10:27	06/19/17 16:28	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		06/19/17 10:27	06/19/17 16:28	5
Calcium	<0.13		0.25	0.13	mg/L		06/19/17 10:27	06/19/17 16:28	5
Chromium	<0.0011		0.0025	0.0011	mg/L		06/19/17 10:27	06/19/17 16:28	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		06/19/17 10:27	06/19/17 16:28	5
Lead	<0.00035		0.0013	0.00035	mg/L		06/19/17 10:27	06/19/17 16:28	5
Lithium	<0.0032		0.0050	0.0032	mg/L		06/19/17 10:27	06/19/17 16:28	5

TestAmerica Pensacola



# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-1  
SDG: Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 400-357477/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 357648**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 357477**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	<0.00085		0.015	0.00085	mg/L		06/19/17 10:27	06/19/17 16:28	5
Selenium	<0.00024		0.0013	0.00024	mg/L		06/19/17 10:27	06/19/17 16:28	5
Thallium	<0.000085		0.00050	0.000085	mg/L		06/19/17 10:27	06/19/17 16:28	5

**Lab Sample ID: LCS 400-357477/2-A**  
**Matrix: Water**  
**Analysis Batch: 357648**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 357477**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0567		mg/L		113	80 - 120
Arsenic	0.0500	0.0524		mg/L		105	80 - 120
Barium	0.0500	0.0536		mg/L		107	80 - 120
Beryllium	0.0500	0.0520		mg/L		104	80 - 120
Boron	0.100	0.105		mg/L		105	80 - 120
Cadmium	0.0500	0.0507		mg/L		101	80 - 120
Calcium	5.00	4.90		mg/L		98	80 - 120
Chromium	0.0500	0.0547		mg/L		109	80 - 120
Cobalt	0.0500	0.0503		mg/L		101	80 - 120
Lead	0.0500	0.0512		mg/L		102	80 - 120
Lithium	0.0500	0.0522		mg/L		104	80 - 120
Molybdenum	0.100	0.102		mg/L		102	80 - 120
Selenium	0.0500	0.0507		mg/L		101	80 - 120
Thallium	0.0100	0.0103		mg/L		103	80 - 120

**Lab Sample ID: 400-139121-G-1-B MS ^5**  
**Matrix: Water**  
**Analysis Batch: 357648**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 357477**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0013	J	0.0500	0.0634		mg/L		124	75 - 125
Arsenic	0.0011	J	0.0500	0.0592		mg/L		116	75 - 125
Barium	0.16	F1	0.0500	0.232	F1	mg/L		146	75 - 125
Beryllium	<0.00034		0.0500	0.0519		mg/L		104	75 - 125
Boron	0.053		0.100	0.153		mg/L		100	75 - 125
Cadmium	<0.00034		0.0500	0.0551		mg/L		110	75 - 125
Calcium	53		5.00	62.0	4	mg/L		175	75 - 125
Chromium	<0.0011		0.0500	0.0598		mg/L		120	75 - 125
Cobalt	0.0013	J	0.0500	0.0554		mg/L		108	75 - 125
Lead	<0.00035		0.0500	0.0512		mg/L		102	75 - 125
Lithium	0.0069		0.0500	0.0534		mg/L		93	75 - 125
Molybdenum	0.0046	J	0.100	0.114		mg/L		110	75 - 125
Selenium	0.0024		0.0500	0.0518		mg/L		99	75 - 125
Thallium	<0.000085		0.0100	0.0102		mg/L		102	75 - 125

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-1  
SDG: Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 400-139121-G-1-C MSD ^5**  
**Matrix: Water**  
**Analysis Batch: 357648**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 357477**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	0.0013	J	0.0500	0.0575		mg/L		112	75 - 125	10	20
Arsenic	0.0011	J	0.0500	0.0533		mg/L		104	75 - 125	10	20
Barium	0.16	F1	0.0500	0.215		mg/L		112	75 - 125	7	20
Beryllium	<0.00034		0.0500	0.0506		mg/L		101	75 - 125	2	20
Boron	0.053		0.100	0.148		mg/L		96	75 - 125	3	20
Cadmium	<0.00034		0.0500	0.0511		mg/L		102	75 - 125	7	20
Calcium	53		5.00	58.3	4	mg/L		102	75 - 125	6	20
Chromium	<0.0011		0.0500	0.0548		mg/L		110	75 - 125	9	20
Cobalt	0.0013	J	0.0500	0.0504		mg/L		98	75 - 125	9	20
Lead	<0.00035		0.0500	0.0501		mg/L		100	75 - 125	2	20
Lithium	0.0069		0.0500	0.0518		mg/L		90	75 - 125	3	20
Molybdenum	0.0046	J	0.100	0.103		mg/L		98	75 - 125	11	20
Selenium	0.0024		0.0500	0.0507		mg/L		97	75 - 125	2	20
Thallium	<0.000085		0.0100	0.0101		mg/L		101	75 - 125	1	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 400-356635/14-A**  
**Matrix: Water**  
**Analysis Batch: 356836**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 356635**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		06/12/17 10:47	06/13/17 13:55	1

**Lab Sample ID: LCS 400-356635/15-A**  
**Matrix: Water**  
**Analysis Batch: 356836**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 356635**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.000949		mg/L		94	80 - 120

**Lab Sample ID: 400-139124-1 MS**  
**Matrix: Water**  
**Analysis Batch: 356836**

**Client Sample ID: WGWC-14A**  
**Prep Type: Total/NA**  
**Prep Batch: 356635**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070	F1	0.00201	0.00164		mg/L		81	80 - 120

**Lab Sample ID: 400-139124-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 356836**

**Client Sample ID: WGWC-14A**  
**Prep Type: Total/NA**  
**Prep Batch: 356635**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070	F1	0.00201	0.00148	F1	mg/L		73	80 - 120	10	20

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-1  
 SDG: Ash Pond

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 400-356789/1**  
**Matrix: Water**  
**Analysis Batch: 356789**

**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			06/13/17 14:15	1

**Lab Sample ID: LCS 400-356789/2**  
**Matrix: Water**  
**Analysis Batch: 356789**

**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: 400-139124-1 DU**  
**Matrix: Water**  
**Analysis Batch: 356789**

**Client Sample ID: WGWC-14A**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	72		72.0		mg/L		0	5

# Chain of Custody Record

Lab PM: Whitmire, Cheyenne R  
E-Mail: cheyenne.whitmire@testamericainc.com

Carrier Tracking No(s):

Page: 1 of 1  
Job #:

Client Information

Client Contact: Joju Abraham  
Company: Southern Company  
Address: 241 Ralph McGill Blvd SE B10185  
City: Atlanta  
State, Zip: GA, 30308  
Phone: 404-506-7239  
Email: JAbraham@southernco.com  
Project Name: Plant Wansley - AP  
Site: CCR

Due Date Requested:  
TAT Requested (days):  
PO #:  
WO #:  
Project #:  
SSOW#:

Analysis Requested

Perform M/MSD (Yes or No)	Field Filtered Sample (Yes or No)	TDS - SM 2540C; Cl, F, SO4 - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320
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Sample Identification

Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air)	Preservation Code	Field Filtered Sample (Yes or No)	Perform M/MSD (Yes or No)	TDS - SM 2540C; Cl, F, SO4 - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320	Total Number of Containers	Special Instructions/Note:
WGWC-14A	6/7/17	14:45	G	GW		N	N	X	X	X	3	
WGWC-19	6/7/17	16:25	G	GW		N	N	X	X	X	3	
FB-1	6/8/17	08:35	G	W		N	N	X	X	X	3	
FERB-1	6/8/17	08:30	G	W		N	N	X	X	X	3	
DUP-1	6/7/17	--	G	GW		N	N	X	X	X	3	

Preservation Codes:  
A - HCL  
B - NaOH  
C - Zn Acetate  
D - Nitric Acid  
E - NaHSO4  
F - MeOH  
G - Amchlor  
H - Ascorbic Acid  
I - Ice  
J - DI Water  
K - EDTA  
L - EDA  
Other:

Special Instructions/Note:

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:

Possible Hazard Identification  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by:

Relinquished by: *Cayce Wurdle*  
Relinquished by: *DTF*  
Relinquished by:

Date: 6/9/17 1320  
Date/Time: 6/9/17 1600  
Date/Time:

Company: *DTF*  
Company: *DTF*  
Company:

Method of Shipment:

Received by: *DTF*  
Received by: *DTF*  
Received by:

Cooler Temperature(s) °C and Other Remarks: 4.0°C JRE2



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-139124-1

SDG Number: Ash Pond

**Login Number: 139124**

**List Number: 1**

**Creator: Siddoway, Benjamin**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.0°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 Wansley

TestAmerica Job ID: 400-139124-1  
 SDG: Ash Pond

## 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	06-30-18
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: 400-139124-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR - Plant Wansley


For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Joju Abraham



Authorized for release by:

7/12/2017 6:24:13 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

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### LINKS

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[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Detection Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-2  
SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Lab Sample ID: 400-139124-1**

No Detections.

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-139124-2**

No Detections.

**Client Sample ID: FB-1**

**Lab Sample ID: 400-139124-3**

No Detections.

**Client Sample ID: FERB-1**

**Lab Sample ID: 400-139124-4**

No Detections.

**Client Sample ID: DUP-1**

**Lab Sample ID: 400-139124-5**

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola



# Method Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-2  
SDG: Ash Pond

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 Wansley

TestAmerica Job ID: 400-139124-2  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-139124-1	WGWC-14A	Water	06/07/17 14:45	06/10/17 08:18
400-139124-2	WGWC-19	Water	06/07/17 16:25	06/10/17 08:18
400-139124-3	FB-1	Water	06/08/17 08:35	06/10/17 08:18
400-139124-4	FERB-1	Water	06/08/17 08:30	06/10/17 08:18
400-139124-5	DUP-1	Water	06/07/17 00:00	06/10/17 08:18

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
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- 10
- 11
- 12
- 13

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-2  
 SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Lab Sample ID: 400-139124-1**

**Date Collected: 06/07/17 14:45**

**Matrix: Water**

**Date Received: 06/10/17 08:18**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.431		0.124	0.130	1.00	0.108	pCi/L	06/14/17 15:00	07/07/17 05:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					06/14/17 15:00	07/07/17 05:44	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.629		0.273	0.279	1.00	0.396	pCi/L	06/15/17 09:12	06/26/17 14:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					06/15/17 09:12	06/26/17 14:46	1
Y Carrier	87.9		40 - 110					06/15/17 09:12	06/26/17 14:46	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.06		0.300	0.308	5.00	0.396	pCi/L		07/07/17 17:22	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-2  
SDG: Ash Pond

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-139124-2**

**Date Collected: 06/07/17 16:25**

**Matrix: Water**

**Date Received: 06/10/17 08:18**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0785	U	0.0699	0.0703	1.00	0.106	pCi/L	06/14/17 15:00	07/07/17 05:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					06/14/17 15:00	07/07/17 05:44	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0472	U	0.216	0.216	1.00	0.377	pCi/L	06/15/17 09:12	06/26/17 14:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					06/15/17 09:12	06/26/17 14:46	1
Y Carrier	87.1		40 - 110					06/15/17 09:12	06/26/17 14:46	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	0.126	U	0.227	0.227	5.00	0.377	pCi/L		07/07/17 17:22	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-2  
 SDG: Ash Pond

**Client Sample ID: FB-1**

**Lab Sample ID: 400-139124-3**

**Date Collected: 06/08/17 08:35**

**Matrix: Water**

**Date Received: 06/10/17 08:18**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0624	U	0.0615	0.0618	1.00	0.0945	pCi/L	06/14/17 15:00	07/07/17 05:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					06/14/17 15:00	07/07/17 05:44	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.154	U	0.199	0.200	1.00	0.331	pCi/L	06/15/17 09:12	06/26/17 14:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					06/15/17 09:12	06/26/17 14:46	1
Y Carrier	85.6		40 - 110					06/15/17 09:12	06/26/17 14:46	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	0.217	U	0.208	0.209	5.00	0.331	pCi/L		07/07/17 17:22	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-2  
 SDG: Ash Pond

**Client Sample ID: FERB-1**

**Lab Sample ID: 400-139124-4**

**Date Collected: 06/08/17 08:30**

**Matrix: Water**

**Date Received: 06/10/17 08:18**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0383	U	0.0515	0.0516	1.00	0.0863	pCi/L	06/14/17 15:00	07/07/17 05:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					06/14/17 15:00	07/07/17 05:44	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0270	U	0.172	0.173	1.00	0.315	pCi/L	06/15/17 09:12	06/26/17 14:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					06/15/17 09:12	06/26/17 14:46	1
Y Carrier	89.0		40 - 110					06/15/17 09:12	06/26/17 14:46	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	0.0113	U	0.180	0.180	5.00	0.315	pCi/L		07/07/17 17:22	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-2  
SDG: Ash Pond

**Client Sample ID: DUP-1**

**Lab Sample ID: 400-139124-5**

**Date Collected: 06/07/17 00:00**

**Matrix: Water**

**Date Received: 06/10/17 08:18**

### Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.468		0.129	0.135	1.00	0.101	pCi/L	06/14/17 15:00	07/07/17 05:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					06/14/17 15:00	07/07/17 05:44	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0776	U	0.209	0.209	1.00	0.360	pCi/L	06/15/17 09:12	06/26/17 14:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		40 - 110					06/15/17 09:12	06/26/17 14:47	1
Y Carrier	89.0		40 - 110					06/15/17 09:12	06/26/17 14:47	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	0.546		0.245	0.249	5.00	0.360	pCi/L		07/07/17 17:22	1



# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-2  
SDG: Ash Pond

## Qualifiers

### Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-2  
SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Date Collected: 06/07/17 14:45**

**Date Received: 06/10/17 08:18**

**Lab Sample ID: 400-139124-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			313416	06/14/17 15:00	MBC	TAL SL
Total/NA	Analysis	9315		1	316560	07/07/17 05:44	ALD	TAL SL
Total/NA	Prep	PrecSep_0			313588	06/15/17 09:12	LDE	TAL SL
Total/NA	Analysis	9320		1	315322	06/26/17 14:46	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	316603	07/07/17 17:22	RTM	TAL SL

**Client Sample ID: WGWC-19**

**Date Collected: 06/07/17 16:25**

**Date Received: 06/10/17 08:18**

**Lab Sample ID: 400-139124-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			313416	06/14/17 15:00	MBC	TAL SL
Total/NA	Analysis	9315		1	316560	07/07/17 05:44	ALD	TAL SL
Total/NA	Prep	PrecSep_0			313588	06/15/17 09:12	LDE	TAL SL
Total/NA	Analysis	9320		1	315322	06/26/17 14:46	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	316603	07/07/17 17:22	RTM	TAL SL

**Client Sample ID: FB-1**

**Date Collected: 06/08/17 08:35**

**Date Received: 06/10/17 08:18**

**Lab Sample ID: 400-139124-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			313416	06/14/17 15:00	MBC	TAL SL
Total/NA	Analysis	9315		1	316560	07/07/17 05:44	ALD	TAL SL
Total/NA	Prep	PrecSep_0			313588	06/15/17 09:12	LDE	TAL SL
Total/NA	Analysis	9320		1	315322	06/26/17 14:46	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	316603	07/07/17 17:22	RTM	TAL SL

**Client Sample ID: FERB-1**

**Date Collected: 06/08/17 08:30**

**Date Received: 06/10/17 08:18**

**Lab Sample ID: 400-139124-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			313416	06/14/17 15:00	MBC	TAL SL
Total/NA	Analysis	9315		1	316560	07/07/17 05:44	ALD	TAL SL
Total/NA	Prep	PrecSep_0			313588	06/15/17 09:12	LDE	TAL SL
Total/NA	Analysis	9320		1	315322	06/26/17 14:46	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	316603	07/07/17 17:22	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-2  
SDG: Ash Pond

**Client Sample ID: DUP-1**

**Lab Sample ID: 400-139124-5**

**Date Collected: 06/07/17 00:00**

**Matrix: Water**

**Date Received: 06/10/17 08:18**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			313416	06/14/17 15:00	MBC	TAL SL
Total/NA	Analysis	9315		1	316560	07/07/17 05:44	ALD	TAL SL
Total/NA	Prep	PrecSep_0			313588	06/15/17 09:12	LDE	TAL SL
Total/NA	Analysis	9320		1	315322	06/26/17 14:47	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	316603	07/07/17 17:22	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 Wansley

TestAmerica Job ID: 400-139124-2  
 SDG: Ash Pond

## Rad

### Prep Batch: 313416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-139124-1	WGWC-14A	Total/NA	Water	PrecSep-21	
400-139124-2	WGWC-19	Total/NA	Water	PrecSep-21	
400-139124-3	FB-1	Total/NA	Water	PrecSep-21	
400-139124-4	FERB-1	Total/NA	Water	PrecSep-21	
400-139124-5	DUP-1	Total/NA	Water	PrecSep-21	
MB 160-313416/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-313416/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
490-129899-K-3-A MS	Matrix Spike	Total/NA	Water	PrecSep-21	
490-129899-K-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep-21	

### Prep Batch: 313588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-139124-1	WGWC-14A	Total/NA	Water	PrecSep_0	
400-139124-2	WGWC-19	Total/NA	Water	PrecSep_0	
400-139124-3	FB-1	Total/NA	Water	PrecSep_0	
400-139124-4	FERB-1	Total/NA	Water	PrecSep_0	
400-139124-5	DUP-1	Total/NA	Water	PrecSep_0	
MB 160-313588/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-313588/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
490-129899-K-3-C MS	Matrix Spike	Total/NA	Water	PrecSep_0	
490-129899-K-3-D MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep_0	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-2  
SDG: Ash Pond

## Method: 9315 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-313416/1-A**  
**Matrix: Water**  
**Analysis Batch: 316539**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 313416**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.02393	U	0.0365	0.0366	1.00	0.0634	pCi/L	06/14/17 15:00	07/07/17 05:39	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					06/14/17 15:00	07/07/17 05:39	1

**Lab Sample ID: LCS 160-313416/2-A**  
**Matrix: Water**  
**Analysis Batch: 316539**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 313416**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	10.77		1.12	1.00	0.0572	pCi/L	95	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	97.1		40 - 110						

**Lab Sample ID: 490-129899-K-3-A MS**  
**Matrix: Water**  
**Analysis Batch: 316560**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 313416**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	0.172		11.4	11.38		1.17	1.00	0.0814	pCi/L	99	75 - 138
Carrier	MS %Yield	MS Qualifier	Limits								
Ba Carrier	97.9		40 - 110								

**Lab Sample ID: 490-129899-K-3-B MSD**  
**Matrix: Water**  
**Analysis Batch: 316560**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 313416**

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	0.172		11.4	11.42		1.17	1.00	0.0959	pCi/L	99	75 - 138	0.02	1
Carrier	MSD %Yield	MSD Qualifier	Limits										
Ba Carrier	101		40 - 110										

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-2  
SDG: Ash Pond

## Method: 9320 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-313588/1-A**  
**Matrix: Water**  
**Analysis Batch: 315322**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 313588**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1549	U	0.173	0.174	1.00	0.284	pCi/L	06/15/17 09:12	06/26/17 14:44	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					06/15/17 09:12	06/26/17 14:44	1
Y Carrier	89.3		40 - 110					06/15/17 09:12	06/26/17 14:44	1

**Lab Sample ID: LCS 160-313588/2-A**  
**Matrix: Water**  
**Analysis Batch: 315322**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 313588**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.3	14.66		1.55	1.00	0.324	pCi/L	111	56 - 140
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	97.1		40 - 110						
Y Carrier	88.2		40 - 110						

**Lab Sample ID: 490-129899-K-3-C MS**  
**Matrix: Water**  
**Analysis Batch: 315321**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 313588**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	0.258	U	13.3	15.24		1.60	1.00	0.369	pCi/L	113	45 - 150
Carrier	MS %Yield	MS Qualifier	Limits								
Ba Carrier	97.9		40 - 110								
Y Carrier	87.9		40 - 110								

**Lab Sample ID: 490-129899-K-3-D MSD**  
**Matrix: Water**  
**Analysis Batch: 315321**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 313588**

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	0.258	U	13.3	14.49		1.53	1.00	0.338	pCi/L	107	45 - 150	0.24	1
Carrier	MSD %Yield	MSD Qualifier	Limits										
Ba Carrier	101		40 - 110										
Y Carrier	88.6		40 - 110										

### Chain of Custody Record

**Client Information**  
 Client Contact: Joju Abraham  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - AP  
 Site: CCR

**Lab PM:** Whitmire, Cheyenne R  
**E-Mail:** cheyenne.whitmire@testamericainc.com  
**Carrier Tracking No(s):**  
**Job #:**

**Due Date Requested:**  
**TAT Requested (days):**  
**PO #:**  
**WO #:**  
**Project #:**  
**SSOW#:**

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform M/MSD (Yes or No)	Analysis Requested		Total Number of Containers	Special Instructions/Note:
							TDS - SM 2540C; Cl, F, SO4 - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470		
WGWC-14A	6/7/17	14:45	G	GW	N	N	X	D	3	
WGWC-19	6/7/17	16:25	G	GW	N	N	X	X	3	
FB-1	6/8/17	08:35	G	W	N	N	X	X	3	
FERB-1	6/8/17	08:30	G	W	N	N	X	X	3	
DUP-1	6/7/17	--	G	GW	N	N	X	X	3	



**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
**Deliverable Requested:** I, II, III, IV, Other (specify)

**Empty Kit Relinquished by:** \_\_\_\_\_  
**Relinquished by:** *Cayce Wurdle* Date/Time: 6/9/17 1320 Company: *SC*  
**Relinquished by:** *DTF* Date/Time: 6/9/17 1600 Company: *SC*  
**Relinquished by:** \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
**Custody Seal No.:** *4.0°C JRE2*

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months  
**Special Instructions/QC Requirements:**

**Method of Shipment:** \_\_\_\_\_  
**Received by:** \_\_\_\_\_ Date/Time: 6/9/17 1320 Company: *SC*  
**Received by:** \_\_\_\_\_ Date/Time: 6/10/17 0858 Company: *MA-16W*  
**Received by:** \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
**Cooler Temperature(s) °C and Other Remarks:** 4.0°C JRE2

## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-139124-2

SDG Number: Ash Pond

**Login Number: 139124**

**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	4.0°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 <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





# Accreditation/Certification Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-2  
SDG: Ash Pond

## Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17 *
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-17 *
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17 *
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

## Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-18
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-18
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-17 *
Missouri	State Program	7	780	06-30-17 *
Nevada	State Program	9	MO000542017-1	07-31-17 *
New Jersey	NELAP	2	MO002	06-30-18
New York	NELAP	2	11616	03-31-18

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Pensacola

# Accreditation/Certification Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-139124-2  
SDG: Ash Pond

## 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: 400-140595-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR - Plant Wansley

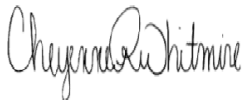
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Joju Abraham



Authorized for release by:

8/10/2017 1:12:05 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-1  
SDG: Ash Pond

**Job ID: 400-140595-1**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-140595-1

#### Metals

Method(s) 6020: The method blank for preparation batch 361197 and analytical batch 361911 contained Selenium 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) 6020: The continuing calibration verification (CCV) associated with batch 362368 recovered above the upper control limit for Lead. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method(s) 6020: The laboratory control sample (LCS) for preparation batch 361197 and analytical batch 362368 recovered outside control limits for the following analytes: Lead. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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# Detection Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-1  
SDG: Ash Pond

## Client Sample ID: WGWC-14A

## Lab Sample ID: 400-140595-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.1		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	17		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00095	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.038		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.3		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0085		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	68		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-19

## Lab Sample ID: 400-140595-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.3		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.39		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	3.3		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.0013	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	9.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.045		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	70		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FB-1

## Lab Sample ID: 400-140595-3

No Detections.

## Client Sample ID: FERB-1

## Lab Sample ID: 400-140595-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0010	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable

## Client Sample ID: DUP-1

## Lab Sample ID: 400-140595-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.1		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	17		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00090	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.037		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0084		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	64		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Method Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-1  
SDG: Ash Pond

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN

#### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 Wansley

TestAmerica Job ID: 400-140595-1  
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-140595-1	WGWC-14A	Water	07/11/17 12:28	07/13/17 08:10
400-140595-2	WGWC-19	Water	07/11/17 12:05	07/13/17 08:10
400-140595-3	FB-1	Water	07/11/17 12:15	07/13/17 08:10
400-140595-4	FERB-1	Water	07/11/17 12:20	07/13/17 08:10
400-140595-5	DUP-1	Water	07/11/17 00:00	07/13/17 08:10

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# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-1  
SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Lab Sample ID: 400-140595-1**

**Date Collected: 07/11/17 12:28**

**Matrix: Water**

**Date Received: 07/13/17 08:10**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>4.1</b>		1.0	0.89	mg/L			07/16/17 17:31	1
Fluoride	<0.082		0.20	0.082	mg/L			07/16/17 17:31	1
<b>Sulfate</b>	<b>17</b>		1.0	0.70	mg/L			07/16/17 17:31	1

### 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		07/20/17 09:55	07/28/17 13:01	5
<b>Arsenic</b>	<b>0.00095</b>	<b>J</b>	0.0013	0.00046	mg/L		07/20/17 09:55	07/28/17 13:01	5
<b>Barium</b>	<b>0.038</b>		0.0025	0.00049	mg/L		07/20/17 09:55	07/28/17 13:01	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/20/17 09:55	07/28/17 13:01	5
Boron	<0.021		0.050	0.021	mg/L		07/20/17 09:55	07/26/17 18:09	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/20/17 09:55	07/28/17 13:01	5
<b>Calcium</b>	<b>2.3</b>		0.25	0.13	mg/L		07/20/17 09:55	07/28/17 13:01	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/20/17 09:55	07/28/17 13:01	5
<b>Cobalt</b>	<b>0.0085</b>		0.0025	0.00040	mg/L		07/20/17 09:55	07/26/17 18:09	5
Lead	<0.00035	^ *	0.0013	0.00035	mg/L		07/20/17 09:55	07/28/17 13:01	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/20/17 09:55	07/28/17 13:01	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/20/17 09:55	07/28/17 13:01	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/20/17 09:55	07/28/17 13:01	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/20/17 09:55	07/28/17 13:01	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		07/20/17 09:25	07/21/17 10:59	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>68</b>		5.0	3.4	mg/L			07/16/17 15:45	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-1  
SDG: Ash Pond

**Client Sample ID: WGWC-19**

**Date Collected: 07/11/17 12:05**

**Date Received: 07/13/17 08:10**

**Lab Sample ID: 400-140595-2**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.3		1.0	0.89	mg/L			07/16/17 17:54	1
Fluoride	0.39		0.20	0.082	mg/L			07/16/17 17:54	1
Sulfate	3.3		1.0	0.70	mg/L			07/16/17 17:54	1

### 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		07/20/17 09:55	07/28/17 13:06	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/20/17 09:55	07/28/17 13:06	5
Barium	0.0013	J	0.0025	0.00049	mg/L		07/20/17 09:55	07/28/17 13:06	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/20/17 09:55	07/28/17 13:06	5
Boron	<0.021		0.050	0.021	mg/L		07/20/17 09:55	07/26/17 18:14	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/20/17 09:55	07/28/17 13:06	5
Calcium	9.5		0.25	0.13	mg/L		07/20/17 09:55	07/28/17 13:06	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/20/17 09:55	07/28/17 13:06	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/20/17 09:55	07/26/17 18:14	5
Lead	<0.00035	^ *	0.0013	0.00035	mg/L		07/20/17 09:55	07/28/17 13:06	5
Lithium	0.045		0.0050	0.0032	mg/L		07/20/17 09:55	07/28/17 13:06	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/20/17 09:55	07/28/17 13:06	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/20/17 09:55	07/28/17 13:06	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/20/17 09:55	07/28/17 13:06	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		07/20/17 09:25	07/21/17 11:01	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	70		5.0	3.4	mg/L			07/16/17 15:45	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-1  
 SDG: Ash Pond

**Client Sample ID: FB-1**  
**Date Collected: 07/11/17 12:15**  
**Date Received: 07/13/17 08:10**

**Lab Sample ID: 400-140595-3**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			07/16/17 18:40	1
Fluoride	<0.082		0.20	0.082	mg/L			07/16/17 18:40	1
Sulfate	<0.70		1.0	0.70	mg/L			07/16/17 18:40	1

### 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		07/20/17 09:55	07/28/17 13:10	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/20/17 09:55	07/28/17 13:10	5
Barium	<0.00049		0.0025	0.00049	mg/L		07/20/17 09:55	07/28/17 13:10	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/20/17 09:55	07/28/17 13:10	5
Boron	<0.021		0.050	0.021	mg/L		07/20/17 09:55	07/26/17 18:19	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/20/17 09:55	07/28/17 13:10	5
Calcium	<0.13		0.25	0.13	mg/L		07/20/17 09:55	07/28/17 13:10	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/20/17 09:55	07/28/17 13:10	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/20/17 09:55	07/26/17 18:19	5
Lead	<0.00035	^ *	0.0013	0.00035	mg/L		07/20/17 09:55	07/28/17 13:10	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/20/17 09:55	07/28/17 13:10	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/20/17 09:55	07/28/17 13:10	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/20/17 09:55	07/28/17 13:10	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/20/17 09:55	07/28/17 13:10	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		07/20/17 09:25	07/21/17 11:03	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			07/16/17 15:45	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-1  
SDG: Ash Pond

**Client Sample ID: FERB-1**  
**Date Collected: 07/11/17 12:20**  
**Date Received: 07/13/17 08:10**

**Lab Sample ID: 400-140595-4**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			07/16/17 19:48	1
Fluoride	<0.082		0.20	0.082	mg/L			07/16/17 19:48	1
Sulfate	<0.70		1.0	0.70	mg/L			07/16/17 19:48	1

### 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		07/20/17 09:55	07/28/17 13:15	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/20/17 09:55	07/28/17 13:15	5
<b>Barium</b>	<b>0.0010</b>	<b>J</b>	0.0025	0.00049	mg/L		07/20/17 09:55	07/28/17 13:15	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/20/17 09:55	07/28/17 13:15	5
Boron	<0.021		0.050	0.021	mg/L		07/20/17 09:55	07/26/17 18:23	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/20/17 09:55	07/28/17 13:15	5
Calcium	<0.13		0.25	0.13	mg/L		07/20/17 09:55	07/28/17 13:15	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/20/17 09:55	07/28/17 13:15	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/20/17 09:55	07/26/17 18:23	5
Lead	<0.00035	^ *	0.0013	0.00035	mg/L		07/20/17 09:55	07/28/17 13:15	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/20/17 09:55	07/28/17 13:15	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/20/17 09:55	07/28/17 13:15	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/20/17 09:55	07/28/17 13:15	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/20/17 09:55	07/28/17 13:15	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		07/20/17 09:25	07/21/17 11:04	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			07/16/17 15:45	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-1  
SDG: Ash Pond

**Client Sample ID: DUP-1**  
**Date Collected: 07/11/17 00:00**  
**Date Received: 07/13/17 08:10**

**Lab Sample ID: 400-140595-5**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>4.1</b>		1.0	0.89	mg/L			07/16/17 20:11	1
Fluoride	<0.082		0.20	0.082	mg/L			07/16/17 20:11	1
<b>Sulfate</b>	<b>17</b>		1.0	0.70	mg/L			07/16/17 20:11	1

### 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		07/20/17 09:55	07/28/17 13:20	5
<b>Arsenic</b>	<b>0.00090</b>	<b>J</b>	0.0013	0.00046	mg/L		07/20/17 09:55	07/28/17 13:20	5
<b>Barium</b>	<b>0.037</b>		0.0025	0.00049	mg/L		07/20/17 09:55	07/28/17 13:20	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/20/17 09:55	07/28/17 13:20	5
Boron	<0.021		0.050	0.021	mg/L		07/20/17 09:55	07/26/17 18:28	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/20/17 09:55	07/28/17 13:20	5
<b>Calcium</b>	<b>2.4</b>		0.25	0.13	mg/L		07/20/17 09:55	07/28/17 13:20	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/20/17 09:55	07/28/17 13:20	5
<b>Cobalt</b>	<b>0.0084</b>		0.0025	0.00040	mg/L		07/20/17 09:55	07/26/17 18:28	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/20/17 09:55	07/28/17 13:20	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/20/17 09:55	07/28/17 13:20	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/20/17 09:55	07/28/17 13:20	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/20/17 09:55	07/28/17 13:20	5

### Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.00035		0.0013	0.00035	mg/L		07/20/17 09:55	08/01/17 13:59	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		07/20/17 09:25	07/21/17 11:06	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>64</b>		5.0	3.4	mg/L			07/16/17 15:45	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-1  
SDG: Ash Pond

## Qualifiers

### Metals

Qualifier	Qualifier Description
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^	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.
*	LCS or LCSD is outside acceptance limits.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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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 Wansley

TestAmerica Job ID: 400-140595-1  
SDG: Ash Pond

**Client Sample ID: WGWC-14A**

**Date Collected: 07/11/17 12:28**

**Date Received: 07/13/17 08:10**

**Lab Sample ID: 400-140595-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	360671	07/16/17 17:31	TAJ	TAL PEN
Total Recoverable	Prep	3005A			361197	07/20/17 09:55	SEH	TAL PEN
Total Recoverable	Analysis	6020		5	362388	07/26/17 18:09	DRE	TAL PEN
Total Recoverable	Prep	3005A			361197	07/20/17 09:55	SEH	TAL PEN
Total Recoverable	Analysis	6020		5	362368	07/28/17 13:01	DRE	TAL PEN
Total/NA	Prep	7470A			361120	07/20/17 09:25	JAP	TAL PEN
Total/NA	Analysis	7470A		1	361336	07/21/17 10:59	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	360638	07/16/17 15:45	RRC	TAL PEN

**Client Sample ID: WGWC-19**

**Date Collected: 07/11/17 12:05**

**Date Received: 07/13/17 08:10**

**Lab Sample ID: 400-140595-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	360671	07/16/17 17:54	TAJ	TAL PEN
Total Recoverable	Prep	3005A			361197	07/20/17 09:55	SEH	TAL PEN
Total Recoverable	Analysis	6020		5	362388	07/26/17 18:14	DRE	TAL PEN
Total Recoverable	Prep	3005A			361197	07/20/17 09:55	SEH	TAL PEN
Total Recoverable	Analysis	6020		5	362368	07/28/17 13:06	DRE	TAL PEN
Total/NA	Prep	7470A			361120	07/20/17 09:25	JAP	TAL PEN
Total/NA	Analysis	7470A		1	361336	07/21/17 11:01	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	360638	07/16/17 15:45	RRC	TAL PEN

**Client Sample ID: FB-1**

**Date Collected: 07/11/17 12:15**

**Date Received: 07/13/17 08:10**

**Lab Sample ID: 400-140595-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	360671	07/16/17 18:40	TAJ	TAL PEN
Total Recoverable	Prep	3005A			361197	07/20/17 09:55	SEH	TAL PEN
Total Recoverable	Analysis	6020		5	362388	07/26/17 18:19	DRE	TAL PEN
Total Recoverable	Prep	3005A			361197	07/20/17 09:55	SEH	TAL PEN
Total Recoverable	Analysis	6020		5	362368	07/28/17 13:10	DRE	TAL PEN
Total/NA	Prep	7470A			361120	07/20/17 09:25	JAP	TAL PEN
Total/NA	Analysis	7470A		1	361336	07/21/17 11:03	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	360638	07/16/17 15:45	RRC	TAL PEN

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-1  
SDG: Ash Pond

**Client Sample ID: FERB-1**

**Date Collected: 07/11/17 12:20**

**Date Received: 07/13/17 08:10**

**Lab Sample ID: 400-140595-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	360671	07/16/17 19:48	TAJ	TAL PEN
Total Recoverable	Prep	3005A			361197	07/20/17 09:55	SEH	TAL PEN
Total Recoverable	Analysis	6020		5	362388	07/26/17 18:23	DRE	TAL PEN
Total Recoverable	Prep	3005A			361197	07/20/17 09:55	SEH	TAL PEN
Total Recoverable	Analysis	6020		5	362368	07/28/17 13:15	DRE	TAL PEN
Total/NA	Prep	7470A			361120	07/20/17 09:25	JAP	TAL PEN
Total/NA	Analysis	7470A		1	361336	07/21/17 11:04	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	360638	07/16/17 15:45	RRC	TAL PEN

**Client Sample ID: DUP-1**

**Date Collected: 07/11/17 00:00**

**Date Received: 07/13/17 08:10**

**Lab Sample ID: 400-140595-5**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	360671	07/16/17 20:11	TAJ	TAL PEN
Total Recoverable	Prep	3005A			361197	07/20/17 09:55	SEH	TAL PEN
Total Recoverable	Analysis	6020		5	362388	07/26/17 18:28	DRE	TAL PEN
Total Recoverable	Prep	3005A			361197	07/20/17 09:55	SEH	TAL PEN
Total Recoverable	Analysis	6020		5	362368	07/28/17 13:20	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		361197	07/20/17 09:55	SEH	TAL PEN
Total Recoverable	Analysis	6020	RA	5	362686	08/01/17 13:59	DRE	TAL PEN
Total/NA	Prep	7470A			361120	07/20/17 09:25	JAP	TAL PEN
Total/NA	Analysis	7470A		1	361336	07/21/17 11:06	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	360638	07/16/17 15:45	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 Wansley

TestAmerica Job ID: 400-140595-1  
SDG: Ash Pond

## HPLC/IC

### Analysis Batch: 360671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140595-1	WGWC-14A	Total/NA	Water	300.0	
400-140595-2	WGWC-19	Total/NA	Water	300.0	
400-140595-3	FB-1	Total/NA	Water	300.0	
400-140595-4	FERB-1	Total/NA	Water	300.0	
400-140595-5	DUP-1	Total/NA	Water	300.0	
MB 400-360671/4	Method Blank	Total/NA	Water	300.0	
LCS 400-360671/5	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-360671/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-140389-D-1 MS	Matrix Spike	Total/NA	Water	300.0	
400-140389-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

## Metals

### Prep Batch: 361120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140595-1	WGWC-14A	Total/NA	Water	7470A	
400-140595-2	WGWC-19	Total/NA	Water	7470A	
400-140595-3	FB-1	Total/NA	Water	7470A	
400-140595-4	FERB-1	Total/NA	Water	7470A	
400-140595-5	DUP-1	Total/NA	Water	7470A	
MB 400-361120/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-361120/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-140707-A-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-140707-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

### Prep Batch: 361197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140595-1	WGWC-14A	Total Recoverable	Water	3005A	
400-140595-2	WGWC-19	Total Recoverable	Water	3005A	
400-140595-3	FB-1	Total Recoverable	Water	3005A	
400-140595-4	FERB-1	Total Recoverable	Water	3005A	
400-140595-5 - RA	DUP-1	Total Recoverable	Water	3005A	
400-140595-5	DUP-1	Total Recoverable	Water	3005A	
MB 400-361197/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
MB 400-361197/1-A ^5 - RA	Method Blank	Total Recoverable	Water	3005A	
LCS 400-361197/2-A - RA	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 400-361197/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-140540-H-3-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-140540-H-3-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Analysis Batch: 361336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140595-1	WGWC-14A	Total/NA	Water	7470A	361120
400-140595-2	WGWC-19	Total/NA	Water	7470A	361120
400-140595-3	FB-1	Total/NA	Water	7470A	361120
400-140595-4	FERB-1	Total/NA	Water	7470A	361120
400-140595-5	DUP-1	Total/NA	Water	7470A	361120
MB 400-361120/14-A	Method Blank	Total/NA	Water	7470A	361120
LCS 400-361120/15-A	Lab Control Sample	Total/NA	Water	7470A	361120
400-140707-A-1-B MS	Matrix Spike	Total/NA	Water	7470A	361120

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-1  
SDG: Ash Pond

## Metals (Continued)

### Analysis Batch: 361336 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140707-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	361120

### Analysis Batch: 362368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140595-1	WGWC-14A	Total Recoverable	Water	6020	361197
400-140595-2	WGWC-19	Total Recoverable	Water	6020	361197
400-140595-3	FB-1	Total Recoverable	Water	6020	361197
400-140595-4	FERB-1	Total Recoverable	Water	6020	361197
400-140595-5	DUP-1	Total Recoverable	Water	6020	361197
MB 400-361197/1-A ^5	Method Blank	Total Recoverable	Water	6020	361197
LCS 400-361197/2-A	Lab Control Sample	Total Recoverable	Water	6020	361197

### Analysis Batch: 362388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140595-1	WGWC-14A	Total Recoverable	Water	6020	361197
400-140595-2	WGWC-19	Total Recoverable	Water	6020	361197
400-140595-3	FB-1	Total Recoverable	Water	6020	361197
400-140595-4	FERB-1	Total Recoverable	Water	6020	361197
400-140595-5	DUP-1	Total Recoverable	Water	6020	361197
MB 400-361197/1-A ^5	Method Blank	Total Recoverable	Water	6020	361197
LCS 400-361197/2-A	Lab Control Sample	Total Recoverable	Water	6020	361197
400-140540-H-3-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	361197
400-140540-H-3-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	361197

### Analysis Batch: 362686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140595-5 - RA	DUP-1	Total Recoverable	Water	6020	361197
MB 400-361197/1-A ^5 - RA	Method Blank	Total Recoverable	Water	6020	361197
LCS 400-361197/2-A - RA	Lab Control Sample	Total Recoverable	Water	6020	361197

## General Chemistry

### Analysis Batch: 360638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140595-1	WGWC-14A	Total/NA	Water	SM 2540C	
400-140595-2	WGWC-19	Total/NA	Water	SM 2540C	
400-140595-3	FB-1	Total/NA	Water	SM 2540C	
400-140595-4	FERB-1	Total/NA	Water	SM 2540C	
400-140595-5	DUP-1	Total/NA	Water	SM 2540C	
MB 400-360638/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-360638/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-140595-1 DU	WGWC-14A	Total/NA	Water	SM 2540C	
400-140595-2 DU	WGWC-19	Total/NA	Water	SM 2540C	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-1  
SDG: Ash Pond

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 400-360671/4**  
**Matrix: Water**  
**Analysis Batch: 360671**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			07/16/17 11:26	1
Fluoride	<0.082		0.20	0.082	mg/L			07/16/17 11:26	1
Sulfate	<0.70		1.0	0.70	mg/L			07/16/17 11:26	1

**Lab Sample ID: LCS 400-360671/5**  
**Matrix: Water**  
**Analysis Batch: 360671**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.78		mg/L		98	90 - 110
Fluoride	10.0	10.4		mg/L		104	90 - 110
Sulfate	10.0	9.93		mg/L		99	90 - 110

**Lab Sample ID: LCSD 400-360671/6**  
**Matrix: Water**  
**Analysis Batch: 360671**

**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	10.0	9.81		mg/L		98	90 - 110	0	15
Fluoride	10.0	10.5		mg/L		105	90 - 110	0	15
Sulfate	10.0	9.90		mg/L		99	90 - 110	0	15

**Lab Sample ID: 400-140389-D-1 MS**  
**Matrix: Water**  
**Analysis Batch: 360671**

**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	54		50.0	101		mg/L		94	80 - 120
Fluoride	<0.41		50.0	52.8		mg/L		106	80 - 120
Sulfate	7.1		50.0	57.2		mg/L		100	80 - 120

**Lab Sample ID: 400-140389-D-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 360671**

**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	54		50.0	101		mg/L		93	80 - 120	0	20
Fluoride	<0.41		50.0	52.6		mg/L		105	80 - 120	0	20
Sulfate	7.1		50.0	57.1		mg/L		100	80 - 120	0	20

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 400-361197/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 362388**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 361197**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/20/17 09:55	07/26/17 16:39	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/20/17 09:55	07/26/17 16:39	5

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-1  
SDG: Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 400-361197/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 362388**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 361197**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		07/20/17 09:55	07/26/17 16:39	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/20/17 09:55	07/26/17 16:39	5
Boron	<0.021		0.050	0.021	mg/L		07/20/17 09:55	07/26/17 16:39	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/20/17 09:55	07/26/17 16:39	5
Calcium	<0.13		0.25	0.13	mg/L		07/20/17 09:55	07/26/17 16:39	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/20/17 09:55	07/26/17 16:39	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/20/17 09:55	07/26/17 16:39	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		07/20/17 09:55	07/26/17 16:39	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/20/17 09:55	07/26/17 16:39	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/20/17 09:55	07/26/17 16:39	5
Selenium	0.000320	J	0.0013	0.00024	mg/L		07/20/17 09:55	07/26/17 16:39	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/20/17 09:55	07/26/17 16:39	5

**Lab Sample ID: MB 400-361197/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 362368**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 361197**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/20/17 09:55	07/28/17 11:56	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/20/17 09:55	07/28/17 11:56	5
Barium	<0.00049		0.0025	0.00049	mg/L		07/20/17 09:55	07/28/17 11:56	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/20/17 09:55	07/28/17 11:56	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/20/17 09:55	07/28/17 11:56	5
Calcium	<0.13		0.25	0.13	mg/L		07/20/17 09:55	07/28/17 11:56	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/20/17 09:55	07/28/17 11:56	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		07/20/17 09:55	07/28/17 11:56	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/20/17 09:55	07/28/17 11:56	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/20/17 09:55	07/28/17 11:56	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/20/17 09:55	07/28/17 11:56	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/20/17 09:55	07/28/17 11:56	5

**Lab Sample ID: LCS 400-361197/2-A**  
**Matrix: Water**  
**Analysis Batch: 362388**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 361197**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0533		mg/L		107	80 - 120
Arsenic	0.0500	0.0517		mg/L		103	80 - 120
Barium	0.0500	0.0513		mg/L		103	80 - 120
Beryllium	0.0500	0.0497		mg/L		99	80 - 120
Boron	0.100	0.0969		mg/L		97	80 - 120
Cadmium	0.0500	0.0516		mg/L		103	80 - 120
Calcium	5.00	5.01		mg/L		100	80 - 120
Cobalt	0.0500	0.0526		mg/L		105	80 - 120
Lithium	0.0500	0.0548		mg/L		110	80 - 120
Molybdenum	0.100	0.102		mg/L		102	80 - 120
Selenium	0.0500	0.0517		mg/L		103	80 - 120
Thallium	0.0100	0.0104		mg/L		104	80 - 120

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-1  
SDG: Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 400-361197/2-A**  
**Matrix: Water**  
**Analysis Batch: 362368**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 361197**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0521		mg/L		104	80 - 120
Arsenic	0.0500	0.0497		mg/L		99	80 - 120
Barium	0.0500	0.0510		mg/L		102	80 - 120
Beryllium	0.0500	0.0511		mg/L		102	80 - 120
Cadmium	0.0500	0.0510		mg/L		102	80 - 120
Calcium	5.00	4.93		mg/L		99	80 - 120
Chromium	0.0500	0.0504		mg/L		101	80 - 120
Lead	0.0500	0.0616	^ *	mg/L		123	80 - 120
Lithium	0.0500	0.0520		mg/L		104	80 - 120
Molybdenum	0.100	0.103		mg/L		103	80 - 120
Selenium	0.0500	0.0494		mg/L		99	80 - 120
Thallium	0.0100	0.00983		mg/L		98	80 - 120

**Lab Sample ID: 400-140540-H-3-B MS ^5**  
**Matrix: Water**  
**Analysis Batch: 362388**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 361197**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0547		mg/L		109	75 - 125
Arsenic	<0.00046		0.0500	0.0515		mg/L		103	75 - 125
Barium	0.0051		0.0500	0.0556		mg/L		101	75 - 125
Beryllium	<0.00034		0.0500	0.0479		mg/L		96	75 - 125
Boron	0.11		0.100	0.203		mg/L		98	75 - 125
Cadmium	<0.00034		0.0500	0.0516		mg/L		103	75 - 125
Calcium	0.45		5.00	5.43		mg/L		100	75 - 125
Chromium	<0.0011		0.0500	0.0530		mg/L		106	75 - 125
Cobalt	<0.00040		0.0500	0.0436		mg/L		87	75 - 125
Lead	<0.00035	* ^	0.0500	0.0498	^	mg/L		100	75 - 125
Lithium	0.0050		0.0500	0.0517		mg/L		93	75 - 125
Molybdenum	<0.00085		0.100	0.105		mg/L		105	75 - 125
Selenium	<0.00024		0.0500	0.0510		mg/L		102	75 - 125
Thallium	<0.00085		0.0100	0.00991		mg/L		99	75 - 125

**Lab Sample ID: 400-140540-H-3-C MSD ^5**  
**Matrix: Water**  
**Analysis Batch: 362388**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 361197**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0531		mg/L		106	75 - 125	3	20
Arsenic	<0.00046		0.0500	0.0516		mg/L		103	75 - 125	0	20
Barium	0.0051		0.0500	0.0546		mg/L		99	75 - 125	2	20
Beryllium	<0.00034		0.0500	0.0478		mg/L		96	75 - 125	0	20
Boron	0.11		0.100	0.203		mg/L		97	75 - 125	0	20
Cadmium	<0.00034		0.0500	0.0512		mg/L		102	75 - 125	1	20
Calcium	0.45		5.00	5.47		mg/L		100	75 - 125	1	20
Chromium	<0.0011		0.0500	0.0516		mg/L		103	75 - 125	3	20
Cobalt	<0.00040		0.0500	0.0438		mg/L		88	75 - 125	1	20
Lead	<0.00035	* ^	0.0500	0.0497	^	mg/L		99	75 - 125	0	20

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-1  
SDG: Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-140540-H-3-C MSD ^5  
Matrix: Water  
Analysis Batch: 362388

Client Sample ID: Matrix Spike Duplicate  
Prep Type: Total Recoverable  
Prep Batch: 361197

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Lithium	0.0050		0.0500	0.0502		mg/L		90	75 - 125	3	20
Molybdenum	<0.00085		0.100	0.103		mg/L		103	75 - 125	2	20
Selenium	<0.00024		0.0500	0.0496		mg/L		99	75 - 125	3	20
Thallium	<0.000085		0.0100	0.0100		mg/L		100	75 - 125	1	20

## Method: 6020 - Metals (ICP/MS) - RA

Lab Sample ID: MB 400-361197/1-A ^5  
Matrix: Water  
Analysis Batch: 362686

Client Sample ID: Method Blank  
Prep Type: Total Recoverable  
Prep Batch: 361197

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic - RA	<0.00046		0.0013	0.00046	mg/L		07/20/17 09:55	08/01/17 13:07	5
Barium - RA	<0.00049		0.0025	0.00049	mg/L		07/20/17 09:55	08/01/17 13:07	5
Beryllium - RA	<0.00034		0.0025	0.00034	mg/L		07/20/17 09:55	08/01/17 13:07	5
Boron - RA	<0.021		0.050	0.021	mg/L		07/20/17 09:55	08/01/17 13:07	5
Cadmium - RA	<0.00034		0.0025	0.00034	mg/L		07/20/17 09:55	08/01/17 13:07	5
Calcium - RA	<0.13		0.25	0.13	mg/L		07/20/17 09:55	08/01/17 13:07	5
Chromium - RA	<0.0011		0.0025	0.0011	mg/L		07/20/17 09:55	08/01/17 13:07	5
Cobalt - RA	<0.00040		0.0025	0.00040	mg/L		07/20/17 09:55	08/01/17 13:07	5
Lead - RA	<0.00035		0.0013	0.00035	mg/L		07/20/17 09:55	08/01/17 13:07	5
Lithium - RA	<0.0032		0.0050	0.0032	mg/L		07/20/17 09:55	08/01/17 13:07	5
Molybdenum - RA	<0.00085		0.015	0.00085	mg/L		07/20/17 09:55	08/01/17 13:07	5
Thallium - RA	<0.000085		0.00050	0.000085	mg/L		07/20/17 09:55	08/01/17 13:07	5

Lab Sample ID: LCS 400-361197/2-A  
Matrix: Water  
Analysis Batch: 362686

Client Sample ID: Lab Control Sample  
Prep Type: Total Recoverable  
Prep Batch: 361197

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Antimony - RA	0.0500	0.0493		mg/L		99	80 - 120
Arsenic - RA	0.0500	0.0500		mg/L		100	80 - 120
Barium - RA	0.0500	0.0494		mg/L		99	80 - 120
Beryllium - RA	0.0500	0.0485		mg/L		97	80 - 120
Boron - RA	0.100	0.0949		mg/L		95	80 - 120
Cadmium - RA	0.0500	0.0498		mg/L		100	80 - 120
Calcium - RA	5.00	5.00		mg/L		100	80 - 120
Chromium - RA	0.0500	0.0514		mg/L		103	80 - 120
Cobalt - RA	0.0500	0.0509		mg/L		102	80 - 120
Lead - RA	0.0500	0.0487		mg/L		97	80 - 120
Lithium - RA	0.0500	0.0480		mg/L		96	80 - 120
Molybdenum - RA	0.100	0.0956		mg/L		96	80 - 120
Selenium - RA	0.0500	0.0488		mg/L		98	80 - 120
Thallium - RA	0.0100	0.00946		mg/L		95	80 - 120

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-1  
SDG: Ash Pond

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 400-361120/14-A**  
**Matrix: Water**  
**Analysis Batch: 361336**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 361120**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/20/17 08:49	07/21/17 10:27	1

**Lab Sample ID: LCS 400-361120/15-A**  
**Matrix: Water**  
**Analysis Batch: 361336**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 361120**

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: 400-140707-A-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 361336**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 361120**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00016	J	0.00201	0.00221		mg/L		102	80 - 120

**Lab Sample ID: 400-140707-A-1-C MSD**  
**Matrix: Water**  
**Analysis Batch: 361336**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 361120**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00016	J	0.00201	0.00221		mg/L		102	80 - 120	0	20

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 400-360638/1**  
**Matrix: Water**  
**Analysis Batch: 360638**

**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			07/16/17 15:45	1

**Lab Sample ID: LCS 400-360638/2**  
**Matrix: Water**  
**Analysis Batch: 360638**

**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	282		mg/L		96	78 - 122

**Lab Sample ID: 400-140595-1 DU**  
**Matrix: Water**  
**Analysis Batch: 360638**

**Client Sample ID: WGWC-14A**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	68		68.0		mg/L		0	5

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-1  
 SDG: Ash Pond

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: 400-140595-2 DU**  
**Matrix: Water**  
**Analysis Batch: 360638**

**Client Sample ID: WGWC-19**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	70		70.0		mg/L		0	5

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<b>Client Information</b> Client Contact: <u>Will V. #8 (ERM)</u> Joju Abraham Company: Southern Company Address: 241 Ralph McGill Blvd SE B10185 City: Atlanta State Zip: GA, 30308 Phone: _____ Email: JAbraham@southernco.com Project Name: CCR Plant Wansley Site: <u>AP</u>		Lab PM: Whitmire, Cheyenne R. E-Mail: cheyenne.whitmire@testamericainc.com Carrier Tracking No(s): 400-66486-24706.1 Page: Page 1 of 1 Job #: _____	
<b>Analysis Requested</b> Due Date Requested: _____ TAT Requested (days): _____ PO #: SCS10347656 WO #: _____ Project #: 40007041 SSOW#: _____		<b>Preservation Codes:</b> A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: _____ M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
<b>Sample Identification</b> Sample ID: <u>WGWC-14A</u> <u>WGWC-19</u> <u>FB-1</u> <u>FERB-1</u> <u>DUP-1</u>		<b>Field Filtered Sample (Yes or No)</b> 9315 Ra226, 9320 Ra228 6020, 7470A 2540C, 300 ORGFM, 28D	
<b>Sample Time</b> 7/11/17 1228 7/11/17 1205 7/11/17 1215 7/11/17 1220 7/11/17 —		<b>Matrix</b> (W=water, S=solid, O=waste/oil, BT=tissue, A=AK) Water Water Water Water Water	
<b>Sample Date</b> 7/11/17 7/11/17 7/11/17 7/11/17 7/11/17		<b>Sample Type</b> (C=Comp, G=grab) G G G G G	
<b>Sample Preservation Code:</b> D D D D D		<b>Special Instructions/Note:</b> 4 2nd Radium Control 3 for QA/QC 3 3	
<b>Sample Disposal</b> (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab Archive For _____ Months		<b>Special Instructions/QC Requirements:</b> _____	
<b>Possible Hazard Identification</b> <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify) _____		<b>Empty Kit Relinquished by:</b> Relinquished by: <u>Will V. #8 (ERM)</u> Date/Time: 7/12/17 1000 Relinquished by: _____ Date/Time: 7/12/17 16:00 Relinquished by: _____ Date/Time: _____	
<b>Custody Seals Intact:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No		<b>Custody Seal No.:</b> 310°C JRC2	



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-140595-1

SDG Number: Ash Pond

**Login Number: 140595**

**List Number: 1**

**Creator: Perez, Trina M**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.6°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 Wansley

TestAmerica Job ID: 400-140595-1  
 SDG: Ash Pond

## Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17 *
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-18
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	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17 *
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.



# 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: 400-140595-2

TestAmerica Sample Delivery Group: Plant Wansley Ash Pond

Client Project/Site: CCR - Plant Wansley

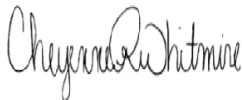
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Joju Abraham



Authorized for release by:

8/15/2017 5:32:50 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-2  
SDG: Plant Wansley Ash Pond

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**Job ID: 400-140595-2**

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**Laboratory: TestAmerica Pensacola**

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**Narrative**

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**Job Narrative  
400-140595-2**

**RAD**

Method(s) 9320: Radium-228 Prep Batch 160-318455: The Laboratory Control Sample (LCS) spike recovery (143%) associated with the following samples is outside the upper QC limit of 140% indicating a potential positive bias for that analyte. 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. WGWC-14A (400-140595-1), WGWC-19 (400-140595-2), WGWC-19 (400-140595-2[DU]), FB-1 (400-140595-3), FERB-1 (400-140595-4), DUP-1 (400-140595-5), (LCS 160-318455/2-A) and (MB 160-318455/1-A)

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# Method Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-2  
SDG: Plant Wansley Ash Pond

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 Wansley

TestAmerica Job ID: 400-140595-2  
SDG: Plant Wansley Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-140595-1	WGWC-14A	Water	07/11/17 12:28	07/13/17 08:10
400-140595-2	WGWC-19	Water	07/11/17 12:05	07/13/17 08:10
400-140595-3	FB-1	Water	07/11/17 12:15	07/13/17 08:10
400-140595-4	FERB-1	Water	07/11/17 12:20	07/13/17 08:10
400-140595-5	DUP-1	Water	07/11/17 00:00	07/13/17 08:10

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# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-14A**

**Lab Sample ID: 400-140595-1**

**Date Collected: 07/11/17 12:28**

**Matrix: Water**

**Date Received: 07/13/17 08:10**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.398		0.108	0.114	1.00	0.0651	pCi/L	07/21/17 08:20	08/14/17 06:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					07/21/17 08:20	08/14/17 06:26	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.318	U*	0.232	0.234	1.00	0.364	pCi/L	07/21/17 08:51	08/04/17 12:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					07/21/17 08:51	08/04/17 12:41	1
Y Carrier	86.4		40 - 110					07/21/17 08:51	08/04/17 12:41	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.716		0.256	0.260	5.00	0.364	pCi/L		08/14/17 18:03	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-140595-2**

Date Collected: 07/11/17 12:05

Matrix: Water

Date Received: 07/13/17 08:10

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.109		0.0687	0.0694	1.00	0.0780	pCi/L	07/21/17 08:20	08/14/17 06:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.8		40 - 110					07/21/17 08:20	08/14/17 06:26	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.402	*	0.230	0.233	1.00	0.344	pCi/L	07/21/17 08:51	08/04/17 12:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.8		40 - 110					07/21/17 08:51	08/04/17 12:41	1
Y Carrier	87.5		40 - 110					07/21/17 08:51	08/04/17 12:41	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.511		0.240	0.243	5.00	0.344	pCi/L		08/14/17 18:03	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: FB-1**  
**Date Collected: 07/11/17 12:15**  
**Date Received: 07/13/17 08:10**

**Lab Sample ID: 400-140595-3**  
**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	0.0216	U	0.0403	0.0404	1.00	0.0743	pCi/L	07/21/17 08:20	08/14/17 06:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					07/21/17 08:20	08/14/17 06:27	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.128	U*	0.219	0.219	1.00	0.370	pCi/L	07/21/17 08:51	08/04/17 12:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					07/21/17 08:51	08/04/17 12:41	1
Y Carrier	89.0		40 - 110					07/21/17 08:51	08/04/17 12:41	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.149	U	0.223	0.223	5.00	0.370	pCi/L		08/14/17 18:03	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: FERB-1**

**Lab Sample ID: 400-140595-4**

**Date Collected: 07/11/17 12:20**

**Matrix: Water**

**Date Received: 07/13/17 08:10**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0594	U	0.0507	0.0510	1.00	0.0670	pCi/L	07/21/17 08:20	08/14/17 06:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					07/21/17 08:20	08/14/17 06:27	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0755	U*	0.214	0.214	1.00	0.369	pCi/L	07/21/17 08:51	08/04/17 12:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					07/21/17 08:51	08/04/17 12:41	1
Y Carrier	92.7		40 - 110					07/21/17 08:51	08/04/17 12:41	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.135	U	0.220	0.220	5.00	0.369	pCi/L		08/14/17 18:03	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: DUP-1**

**Date Collected: 07/11/17 00:00**

**Date Received: 07/13/17 08:10**

**Lab Sample ID: 400-140595-5**

**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	0.392		0.117	0.122	1.00	0.0747	pCi/L	07/21/17 08:20	08/14/17 06:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					07/21/17 08:20	08/14/17 06:27	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0318	U *	0.183	0.183	1.00	0.334	pCi/L	07/21/17 08:51	08/04/17 12:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					07/21/17 08:51	08/04/17 12:41	1
Y Carrier	91.2		40 - 110					07/21/17 08:51	08/04/17 12:41	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.361		0.217	0.220	5.00	0.334	pCi/L		08/14/17 18:03	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-2  
SDG: Plant Wansley Ash Pond

## Qualifiers

### 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	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 Wansley

TestAmerica Job ID: 400-140595-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-14A**

**Date Collected: 07/11/17 12:28**

**Date Received: 07/13/17 08:10**

**Lab Sample ID: 400-140595-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318448	07/21/17 08:20	LDE	TAL SL
Total/NA	Analysis	9315		1	322033	08/14/17 06:26	RTM	TAL SL
Total/NA	Prep	PrecSep_0			318455	07/21/17 08:51	LDE	TAL SL
Total/NA	Analysis	9320		1	320721	08/04/17 12:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322143	08/14/17 18:03	RTM	TAL SL

**Client Sample ID: WGWC-19**

**Date Collected: 07/11/17 12:05**

**Date Received: 07/13/17 08:10**

**Lab Sample ID: 400-140595-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318448	07/21/17 08:20	LDE	TAL SL
Total/NA	Analysis	9315		1	322033	08/14/17 06:26	RTM	TAL SL
Total/NA	Prep	PrecSep_0			318455	07/21/17 08:51	LDE	TAL SL
Total/NA	Analysis	9320		1	320721	08/04/17 12:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322143	08/14/17 18:03	RTM	TAL SL

**Client Sample ID: FB-1**

**Date Collected: 07/11/17 12:15**

**Date Received: 07/13/17 08:10**

**Lab Sample ID: 400-140595-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318448	07/21/17 08:20	LDE	TAL SL
Total/NA	Analysis	9315		1	322033	08/14/17 06:27	RTM	TAL SL
Total/NA	Prep	PrecSep_0			318455	07/21/17 08:51	LDE	TAL SL
Total/NA	Analysis	9320		1	320721	08/04/17 12:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322143	08/14/17 18:03	RTM	TAL SL

**Client Sample ID: FERB-1**

**Date Collected: 07/11/17 12:20**

**Date Received: 07/13/17 08:10**

**Lab Sample ID: 400-140595-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318448	07/21/17 08:20	LDE	TAL SL
Total/NA	Analysis	9315		1	322033	08/14/17 06:27	RTM	TAL SL
Total/NA	Prep	PrecSep_0			318455	07/21/17 08:51	LDE	TAL SL
Total/NA	Analysis	9320		1	320721	08/04/17 12:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322143	08/14/17 18:03	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: DUP-1**

**Lab Sample ID: 400-140595-5**

**Date Collected: 07/11/17 00:00**

**Matrix: Water**

**Date Received: 07/13/17 08:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318448	07/21/17 08:20	LDE	TAL SL
Total/NA	Analysis	9315		1	322033	08/14/17 06:27	RTM	TAL SL
Total/NA	Prep	PrecSep_0			318455	07/21/17 08:51	LDE	TAL SL
Total/NA	Analysis	9320		1	320721	08/04/17 12:41	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322143	08/14/17 18:03	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 Wansley

TestAmerica Job ID: 400-140595-2  
SDG: Plant Wansley Ash Pond

## Rad

### Prep Batch: 318448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140595-1	WGWC-14A	Total/NA	Water	PrecSep-21	
400-140595-2	WGWC-19	Total/NA	Water	PrecSep-21	
400-140595-3	FB-1	Total/NA	Water	PrecSep-21	
400-140595-4	FERB-1	Total/NA	Water	PrecSep-21	
400-140595-5	DUP-1	Total/NA	Water	PrecSep-21	
MB 160-318448/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-318448/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-140595-2 DU	WGWC-19	Total/NA	Water	PrecSep-21	

### Prep Batch: 318455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140595-1	WGWC-14A	Total/NA	Water	PrecSep_0	
400-140595-2	WGWC-19	Total/NA	Water	PrecSep_0	
400-140595-3	FB-1	Total/NA	Water	PrecSep_0	
400-140595-4	FERB-1	Total/NA	Water	PrecSep_0	
400-140595-5	DUP-1	Total/NA	Water	PrecSep_0	
MB 160-318455/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-318455/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-140595-2 DU	WGWC-19	Total/NA	Water	PrecSep_0	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-2  
SDG: Plant Wansley Ash Pond

## Method: 9315 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-318448/1-A**  
**Matrix: Water**  
**Analysis Batch: 322033**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 318448**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.07011	U	0.0566	0.0569	1.00	0.0790	pCi/L	07/21/17 08:20	08/14/17 06:24	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					07/21/17 08:20	08/14/17 06:24	1

**Lab Sample ID: LCS 160-318448/2-A**  
**Matrix: Water**  
**Analysis Batch: 322033**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 318448**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	10.57		1.09	1.00	0.0717	pCi/L	93	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	94.7		40 - 110						

**Lab Sample ID: 400-140595-2 DU**  
**Matrix: Water**  
**Analysis Batch: 322033**

**Client Sample ID: WGWC-19**  
**Prep Type: Total/NA**  
**Prep Batch: 318448**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.109		0.03470	U	0.0480	1.00	0.0808	pCi/L	0.63	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	85.5		40 - 110							

## Method: 9320 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-318455/1-A**  
**Matrix: Water**  
**Analysis Batch: 320941**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 318455**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.03831	U	0.221	0.221	1.00	0.401	pCi/L	07/21/17 08:51	08/04/17 12:38	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					07/21/17 08:51	08/04/17 12:38	1
Y Carrier	85.2		40 - 110					07/21/17 08:51	08/04/17 12:38	1

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-2  
SDG: Plant Wansley Ash Pond

## Method: 9320 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-318455/2-A**  
**Matrix: Water**  
**Analysis Batch: 320941**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 318455**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.1	18.72	*	1.99	1.00	0.413	pCi/L	143	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	94.7		40 - 110
Y Carrier	70.3		40 - 110

**Lab Sample ID: 400-140595-2 DU**  
**Matrix: Water**  
**Analysis Batch: 320721**

**Client Sample ID: WGWC-19**  
**Prep Type: Total/NA**  
**Prep Batch: 318455**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.402	*	0.006340	U *	0.217	1.00	0.388	pCi/L	0.88	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	85.5		40 - 110
Y Carrier	91.6		40 - 110

## Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

**Lab Sample ID: 400-140595-2 DU**  
**Matrix: Water**  
**Analysis Batch: 322143**

**Client Sample ID: WGWC-19**  
**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	0.511		0.04104	U	0.222	5.00	0.388	pCi/L	1.01	

Client Information		Lab PM:		Carrier Tracking No(s)		COC No:	
Southern Company		Whitmire, Cheyenne R		400-66486-24706.1		400-66486-24706.1	
Address: 241 Ralph McGill Blvd SE B10185		E-Mail: cheyenne.whitmire@testamericainc.com		Page 1 of 1		Job #	
City: Atlanta		Due Date Requested:		Analysis Requested		Preservation Codes:	
State Zip: GA, 30308		TAT Requested (days):		Field Filtered Sample (Yes or No)		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 Y - EDA Z - other (specify)	
Phone:		PO #: SCS10347656		Field Filtered Sample (Yes or No)		Other:	
Email: JAbraham@southernco.com		WO #:		Field Filtered Sample (Yes or No)		Total Number of containers	
Project Name: CCR Plant Wansley		Project #: 40007041		Field Filtered Sample (Yes or No)		Special Instructions/Note:	
Site: AP		SSOW#:		Field Filtered Sample (Yes or No)		Special Instructions/Note:	
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=tissue, A=air)	Field Filtered Sample (Yes or No)	Disposition	Special Instructions/Note
WGWC-14A	7/11/17	1228	G	Water	X	D	3
WGWC-19	7/11/17	1205	G	Water	X	D	4 2nd Radium Control
FB-1	7/11/17	1215	G	Water	X	D	3 for QA/QC
FERB-1	7/11/17	1220	G	Water	X	D	3
DUP-1	7/11/17	—	G	Water	X	D	3

Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
<input checked="" type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Return To Client	<input checked="" type="checkbox"/> Disposal By Lab
<input type="checkbox"/> Deliverable Requested: I, II, III, IV, Other (specify)	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Archive For _____ Months
Empty Kit Relinquished by:		Special Instructions/QC Requirements:	
Relinquished by: Will V. #8 (ERM)	Date: 7/12/17	Method of Shipment:	
Relinquished by: [Signature]	Date: 7/12/17	Received by: [Signature]	
Relinquished by: [Signature]	Date: 7/12/17	Received by: [Signature]	
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.10 °C JRC2	



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-140595-2  
SDG Number: Plant Wansley Ash Pond

**Login Number: 140595**

**List Number: 1**

**Creator: Perez, Trina M**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.6°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 Wansley

TestAmerica Job ID: 400-140595-2  
SDG: Plant Wansley Ash Pond

## Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-18
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	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17 *
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

## Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-18
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-18
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-18
Missouri	State Program	7	780	06-30-18
Nevada	State Program	9	MO000542017-1	07-31-18
New Jersey	NELAP	2	MO002	06-30-18
New York	NELAP	2	11616	03-31-18

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Pensacola

# Accreditation/Certification Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-140595-2  
SDG: Plant Wansley Ash Pond

## 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	T104704193-17-11	07-31-18
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: 400-141713-1

TestAmerica Sample Delivery Group: Plant Wansley Ash Pond

Client Project/Site: CCR - Plant Wansley

Sampling Event: Ash Pond

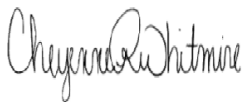
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Joju Abraham



Authorized for release by:

8/29/2017 5:15:52 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Detection Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

## Client Sample ID: WGWA-2

## Lab Sample ID: 400-141713-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.3		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	1.1		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.022		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	18		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	0.0075		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	62		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-1

## Lab Sample ID: 400-141713-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.6		1.0	0.89	mg/L	1		300.0	Total/NA
Antimony	0.0022	J	0.0025	0.0010	mg/L	5		6020	Total Recoverable
Barium	0.044		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.1		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	0.0032	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0017	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0013		0.0013	0.00024	mg/L	5		6020	Total Recoverable

## Client Sample ID: DUP-1

## Lab Sample ID: 400-141713-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.3		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	1.3		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.022		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	18		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	0.0080		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	110		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-7

## Lab Sample ID: 400-141713-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.9		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.012		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	4.8		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 Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

## Client Sample ID: WGWA-18

## Lab Sample ID: 400-141713-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.0		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.087	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	12		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.021		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	24		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0031		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	72		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FB-1

## Lab Sample ID: 400-141713-6

No Detections.

## Client Sample ID: WGWA-6

## Lab Sample ID: 400-141713-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.099	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	8.5		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.0065		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	26		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0043	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	90		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-3

## Lab Sample ID: 400-141713-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.7		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.82	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.015		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	2.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	4.0	J	5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Method Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN

#### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-141713-1	WGWA-2	Water	08/08/17 08:57	08/10/17 08:29
400-141713-2	WGWA-1	Water	08/08/17 10:31	08/10/17 08:29
400-141713-3	DUP-1	Water	08/08/17 00:00	08/10/17 08:29
400-141713-4	WGWA-7	Water	08/08/17 13:25	08/10/17 08:29
400-141713-5	WGWA-18	Water	08/08/17 13:06	08/10/17 08:29
400-141713-6	FB-1	Water	08/08/17 12:51	08/10/17 08:29
400-141713-7	WGWA-6	Water	08/08/17 14:26	08/10/17 08:29
400-141713-8	WGWA-3	Water	08/08/17 15:20	08/10/17 08:29

- 1
- 2
- 3
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- 9
- 10
- 11
- 12
- 13

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-2**  
**Date Collected: 08/08/17 08:57**  
**Date Received: 08/10/17 08:29**

**Lab Sample ID: 400-141713-1**  
**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>2.3</b>		1.0	0.89	mg/L			08/15/17 01:19	1
Fluoride	<0.082		0.20	0.082	mg/L			08/15/17 01:19	1
<b>Sulfate</b>	<b>1.1</b>		1.0	0.70	mg/L			08/15/17 01:19	1

**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		08/19/17 12:04	08/24/17 19:05	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/19/17 12:04	08/24/17 19:05	5
<b>Barium</b>	<b>0.022</b>		0.0025	0.00049	mg/L		08/19/17 12:04	08/24/17 19:05	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/17 12:04	08/24/17 19:05	5
Boron	<0.021		0.050	0.021	mg/L		08/19/17 12:04	08/24/17 19:05	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/17 12:04	08/24/17 19:05	5
<b>Calcium</b>	<b>18</b>		0.25	0.13	mg/L		08/19/17 12:04	08/24/17 19:05	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/17 12:04	08/24/17 19:05	5
<b>Cobalt</b>	<b>0.0012</b>	<b>J</b>	0.0025	0.00040	mg/L		08/19/17 12:04	08/24/17 19:05	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/17 12:04	08/24/17 19:05	5
<b>Lithium</b>	<b>0.0075</b>		0.0050	0.0032	mg/L		08/19/17 12:04	08/24/17 19:05	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/19/17 12:04	08/24/17 19:05	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/19/17 12:04	08/24/17 19:05	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/17 12:04	08/24/17 19:05	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		08/15/17 09:27	08/17/17 14:15	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>62</b>		5.0	3.4	mg/L			08/12/17 13:45	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-1**

**Date Collected: 08/08/17 10:31**

**Date Received: 08/10/17 08:29**

**Lab Sample ID: 400-141713-2**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.6</b>		1.0	0.89	mg/L			08/15/17 01:42	1
Fluoride	<0.082		0.20	0.082	mg/L			08/15/17 01:42	1
Sulfate	<0.70		1.0	0.70	mg/L			08/15/17 01:42	1

### Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.0022</b>	<b>J</b>	0.0025	0.0010	mg/L		08/19/17 12:04	08/24/17 19:19	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/19/17 12:04	08/24/17 19:19	5
<b>Barium</b>	<b>0.044</b>		0.0025	0.00049	mg/L		08/19/17 12:04	08/24/17 19:19	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/17 12:04	08/24/17 19:19	5
Boron	<0.021		0.050	0.021	mg/L		08/19/17 12:04	08/24/17 19:19	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/17 12:04	08/24/17 19:19	5
<b>Calcium</b>	<b>1.1</b>		0.25	0.13	mg/L		08/19/17 12:04	08/24/17 19:19	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/17 12:04	08/24/17 19:19	5
<b>Cobalt</b>	<b>0.0011</b>	<b>J</b>	0.0025	0.00040	mg/L		08/19/17 12:04	08/24/17 19:19	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/17 12:04	08/24/17 19:19	5
<b>Lithium</b>	<b>0.0032</b>	<b>J</b>	0.0050	0.0032	mg/L		08/19/17 12:04	08/24/17 19:19	5
<b>Molybdenum</b>	<b>0.0017</b>	<b>J</b>	0.015	0.00085	mg/L		08/19/17 12:04	08/24/17 19:19	5
<b>Selenium</b>	<b>0.0013</b>		0.0013	0.00024	mg/L		08/19/17 12:04	08/24/17 19:19	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/17 12:04	08/24/17 19:19	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		08/15/17 09:27	08/17/17 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			08/12/17 13:45	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: DUP-1**

**Date Collected: 08/08/17 00:00**

**Date Received: 08/10/17 08:29**

**Lab Sample ID: 400-141713-3**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>2.3</b>		1.0	0.89	mg/L			08/15/17 02:05	1
Fluoride	<0.082		0.20	0.082	mg/L			08/15/17 02:05	1
<b>Sulfate</b>	<b>1.3</b>		1.0	0.70	mg/L			08/15/17 02:05	1

### 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		08/19/17 12:04	08/24/17 19:23	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/19/17 12:04	08/24/17 19:23	5
<b>Barium</b>	<b>0.022</b>		0.0025	0.00049	mg/L		08/19/17 12:04	08/24/17 19:23	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/17 12:04	08/24/17 19:23	5
Boron	<0.021		0.050	0.021	mg/L		08/19/17 12:04	08/24/17 19:23	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/17 12:04	08/24/17 19:23	5
<b>Calcium</b>	<b>18</b>		0.25	0.13	mg/L		08/19/17 12:04	08/24/17 19:23	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/17 12:04	08/24/17 19:23	5
<b>Cobalt</b>	<b>0.0012</b>	<b>J</b>	0.0025	0.00040	mg/L		08/19/17 12:04	08/24/17 19:23	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/17 12:04	08/24/17 19:23	5
<b>Lithium</b>	<b>0.0080</b>		0.0050	0.0032	mg/L		08/19/17 12:04	08/24/17 19:23	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/19/17 12:04	08/24/17 19:23	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/19/17 12:04	08/24/17 19:23	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/17 12:04	08/24/17 19:23	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		08/15/17 09:27	08/17/17 14:19	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>110</b>		5.0	3.4	mg/L			08/12/17 14:25	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-7**

**Lab Sample ID: 400-141713-4**

**Date Collected: 08/08/17 13:25**

**Matrix: Water**

**Date Received: 08/10/17 08:29**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>1.9</b>		1.0	0.89	mg/L			08/15/17 02:28	1
Fluoride	<0.082		0.20	0.082	mg/L			08/15/17 02:28	1
Sulfate	<0.70		1.0	0.70	mg/L			08/15/17 02:28	1

### 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		08/19/17 12:04	08/24/17 19:28	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/19/17 12:04	08/24/17 19:28	5
<b>Barium</b>	<b>0.012</b>		0.0025	0.00049	mg/L		08/19/17 12:04	08/24/17 19:28	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/17 12:04	08/24/17 19:28	5
Boron	<0.021		0.050	0.021	mg/L		08/19/17 12:04	08/24/17 19:28	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/17 12:04	08/24/17 19:28	5
<b>Calcium</b>	<b>4.8</b>		0.25	0.13	mg/L		08/19/17 12:04	08/24/17 19:28	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/17 12:04	08/24/17 19:28	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/19/17 12:04	08/24/17 19:28	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/17 12:04	08/24/17 19:28	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/19/17 12:04	08/24/17 19:28	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/19/17 12:04	08/24/17 19:28	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/19/17 12:04	08/24/17 19:28	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/17 12:04	08/24/17 19:28	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		08/15/17 09:27	08/17/17 14:20	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			08/12/17 13:45	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-18**

**Date Collected: 08/08/17 13:06**

**Date Received: 08/10/17 08:29**

**Lab Sample ID: 400-141713-5**

**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.0		1.0	0.89	mg/L			08/15/17 02:50	1
Fluoride	0.087	J	0.20	0.082	mg/L			08/15/17 02:50	1
Sulfate	12		1.0	0.70	mg/L			08/15/17 02:50	1

**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		08/19/17 12:04	08/24/17 19:32	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/19/17 12:04	08/24/17 19:32	5
Barium	0.021		0.0025	0.00049	mg/L		08/19/17 12:04	08/24/17 19:32	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/17 12:04	08/24/17 19:32	5
Boron	<0.021		0.050	0.021	mg/L		08/19/17 12:04	08/24/17 19:32	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/17 12:04	08/24/17 19:32	5
Calcium	24		0.25	0.13	mg/L		08/19/17 12:04	08/24/17 19:32	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/17 12:04	08/24/17 19:32	5
Cobalt	0.0031		0.0025	0.00040	mg/L		08/19/17 12:04	08/24/17 19:32	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/17 12:04	08/24/17 19:32	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/19/17 12:04	08/24/17 19:32	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/19/17 12:04	08/24/17 19:32	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/19/17 12:04	08/24/17 19:32	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/17 12:04	08/24/17 19:32	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		08/15/17 09:27	08/17/17 14:22	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	72		5.0	3.4	mg/L			08/12/17 13:45	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: FB-1**  
**Date Collected: 08/08/17 12:51**  
**Date Received: 08/10/17 08:29**

**Lab Sample ID: 400-141713-6**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			08/15/17 03:59	1
Fluoride	<0.082		0.20	0.082	mg/L			08/15/17 03:59	1
Sulfate	<0.70		1.0	0.70	mg/L			08/15/17 03:59	1

### 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		08/19/17 12:04	08/24/17 19:37	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/19/17 12:04	08/24/17 19:37	5
Barium	<0.00049		0.0025	0.00049	mg/L		08/19/17 12:04	08/24/17 19:37	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/17 12:04	08/24/17 19:37	5
Boron	<0.021		0.050	0.021	mg/L		08/19/17 12:04	08/24/17 19:37	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/17 12:04	08/24/17 19:37	5
Calcium	<0.13		0.25	0.13	mg/L		08/19/17 12:04	08/24/17 19:37	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/17 12:04	08/24/17 19:37	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/19/17 12:04	08/24/17 19:37	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/17 12:04	08/24/17 19:37	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/19/17 12:04	08/24/17 19:37	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/19/17 12:04	08/24/17 19:37	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/19/17 12:04	08/24/17 19:37	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/17 12:04	08/24/17 19:37	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		08/15/17 09:27	08/17/17 14:24	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			08/12/17 13:45	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-141713-7**

**Date Collected: 08/08/17 14:26**

**Matrix: Water**

**Date Received: 08/10/17 08:29**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4		1.0	0.89	mg/L			08/15/17 04:22	1
Fluoride	0.099	J	0.20	0.082	mg/L			08/15/17 04:22	1
Sulfate	8.5		1.0	0.70	mg/L			08/15/17 04:22	1

### 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		08/19/17 12:04	08/24/17 19:59	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/19/17 12:04	08/24/17 19:59	5
Barium	0.0065		0.0025	0.00049	mg/L		08/19/17 12:04	08/24/17 19:59	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/17 12:04	08/24/17 19:59	5
Boron	<0.021		0.050	0.021	mg/L		08/19/17 12:04	08/24/17 19:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/17 12:04	08/24/17 19:59	5
Calcium	26		0.25	0.13	mg/L		08/19/17 12:04	08/24/17 19:59	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/17 12:04	08/24/17 19:59	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/19/17 12:04	08/24/17 19:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/17 12:04	08/24/17 19:59	5
Lithium	0.0043	J	0.0050	0.0032	mg/L		08/19/17 12:04	08/24/17 19:59	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/19/17 12:04	08/24/17 19:59	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/19/17 12:04	08/24/17 19:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/17 12:04	08/24/17 19:59	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		08/15/17 09:27	08/17/17 14:25	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	90		5.0	3.4	mg/L			08/12/17 13:45	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-3**

**Lab Sample ID: 400-141713-8**

**Date Collected: 08/08/17 15:20**

**Matrix: Water**

**Date Received: 08/10/17 08:29**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>1.7</b>		1.0	0.89	mg/L			08/15/17 05:07	1
Fluoride	<0.082		0.20	0.082	mg/L			08/15/17 05:07	1
<b>Sulfate</b>	<b>0.82</b>	<b>J</b>	1.0	0.70	mg/L			08/15/17 05:07	1

### 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		08/19/17 12:04	08/24/17 20:04	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/19/17 12:04	08/24/17 20:04	5
<b>Barium</b>	<b>0.015</b>		0.0025	0.00049	mg/L		08/19/17 12:04	08/24/17 20:04	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/17 12:04	08/24/17 20:04	5
Boron	<0.021		0.050	0.021	mg/L		08/19/17 12:04	08/24/17 20:04	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/17 12:04	08/24/17 20:04	5
<b>Calcium</b>	<b>2.0</b>		0.25	0.13	mg/L		08/19/17 12:04	08/24/17 20:04	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/17 12:04	08/24/17 20:04	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/19/17 12:04	08/24/17 20:04	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/17 12:04	08/24/17 20:04	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/19/17 12:04	08/24/17 20:04	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/19/17 12:04	08/24/17 20:04	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/19/17 12:04	08/24/17 20:04	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/17 12:04	08/24/17 20:04	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		08/15/17 09:27	08/17/17 14:27	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>4.0</b>	<b>J</b>	5.0	3.4	mg/L			08/12/17 13:45	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

## Qualifiers

### HPLC/IC

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.

### 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.
E	Result exceeded calibration range.

### 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 Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-2**

**Date Collected: 08/08/17 08:57**

**Date Received: 08/10/17 08:29**

**Lab Sample ID: 400-141713-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364214	08/15/17 01:19	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364825	08/19/17 12:04	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 19:05	DRE	TAL PEN
Total/NA	Prep	7470A			364220	08/15/17 09:27	JAP	TAL PEN
Total/NA	Analysis	7470A		1	364620	08/17/17 14:15	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	363977	08/12/17 13:45	TET	TAL PEN

**Client Sample ID: WGWA-1**

**Date Collected: 08/08/17 10:31**

**Date Received: 08/10/17 08:29**

**Lab Sample ID: 400-141713-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364214	08/15/17 01:42	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364825	08/19/17 12:04	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 19:19	DRE	TAL PEN
Total/NA	Prep	7470A			364220	08/15/17 09:27	JAP	TAL PEN
Total/NA	Analysis	7470A		1	364620	08/17/17 14:17	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	363977	08/12/17 13:45	TET	TAL PEN

**Client Sample ID: DUP-1**

**Date Collected: 08/08/17 00:00**

**Date Received: 08/10/17 08:29**

**Lab Sample ID: 400-141713-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364214	08/15/17 02:05	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364825	08/19/17 12:04	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 19:23	DRE	TAL PEN
Total/NA	Prep	7470A			364220	08/15/17 09:27	JAP	TAL PEN
Total/NA	Analysis	7470A		1	364620	08/17/17 14:19	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	363978	08/12/17 14:25	TET	TAL PEN

**Client Sample ID: WGWA-7**

**Date Collected: 08/08/17 13:25**

**Date Received: 08/10/17 08:29**

**Lab Sample ID: 400-141713-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364214	08/15/17 02:28	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364825	08/19/17 12:04	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 19:28	DRE	TAL PEN
Total/NA	Prep	7470A			364220	08/15/17 09:27	JAP	TAL PEN
Total/NA	Analysis	7470A		1	364620	08/17/17 14:20	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	363977	08/12/17 13:45	TET	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-18**

**Lab Sample ID: 400-141713-5**

**Date Collected: 08/08/17 13:06**

**Matrix: Water**

**Date Received: 08/10/17 08:29**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364214	08/15/17 02:50	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364825	08/19/17 12:04	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 19:32	DRE	TAL PEN
Total/NA	Prep	7470A			364220	08/15/17 09:27	JAP	TAL PEN
Total/NA	Analysis	7470A		1	364620	08/17/17 14:22	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	363977	08/12/17 13:45	TET	TAL PEN

**Client Sample ID: FB-1**

**Lab Sample ID: 400-141713-6**

**Date Collected: 08/08/17 12:51**

**Matrix: Water**

**Date Received: 08/10/17 08:29**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364214	08/15/17 03:59	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364825	08/19/17 12:04	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 19:37	DRE	TAL PEN
Total/NA	Prep	7470A			364220	08/15/17 09:27	JAP	TAL PEN
Total/NA	Analysis	7470A		1	364620	08/17/17 14:24	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	363977	08/12/17 13:45	TET	TAL PEN

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-141713-7**

**Date Collected: 08/08/17 14:26**

**Matrix: Water**

**Date Received: 08/10/17 08:29**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364214	08/15/17 04:22	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364825	08/19/17 12:04	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 19:59	DRE	TAL PEN
Total/NA	Prep	7470A			364220	08/15/17 09:27	JAP	TAL PEN
Total/NA	Analysis	7470A		1	364620	08/17/17 14:25	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	363977	08/12/17 13:45	TET	TAL PEN

**Client Sample ID: WGWA-3**

**Lab Sample ID: 400-141713-8**

**Date Collected: 08/08/17 15:20**

**Matrix: Water**

**Date Received: 08/10/17 08:29**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364214	08/15/17 05:07	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364825	08/19/17 12:04	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 20:04	DRE	TAL PEN
Total/NA	Prep	7470A			364220	08/15/17 09:27	JAP	TAL PEN
Total/NA	Analysis	7470A		1	364620	08/17/17 14:27	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	363977	08/12/17 13:45	TET	TAL PEN

TestAmerica Pensacola



# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

**Laboratory References:**

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

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# QC Association Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

## HPLC/IC

### Analysis Batch: 364214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141713-1	WGWA-2	Total/NA	Water	300.0	
400-141713-2	WGWA-1	Total/NA	Water	300.0	
400-141713-3	DUP-1	Total/NA	Water	300.0	
400-141713-4	WGWA-7	Total/NA	Water	300.0	
400-141713-5	WGWA-18	Total/NA	Water	300.0	
400-141713-6	FB-1	Total/NA	Water	300.0	
400-141713-7	WGWA-6	Total/NA	Water	300.0	
400-141713-8	WGWA-3	Total/NA	Water	300.0	
MB 400-364214/28	Method Blank	Total/NA	Water	300.0	
LCS 400-364214/29	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-364214/30	Lab Control Sample Dup	Total/NA	Water	300.0	
400-141785-A-3 MS	Matrix Spike	Total/NA	Water	300.0	
400-141785-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

## Metals

### Prep Batch: 364220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141713-1	WGWA-2	Total/NA	Water	7470A	
400-141713-2	WGWA-1	Total/NA	Water	7470A	
400-141713-3	DUP-1	Total/NA	Water	7470A	
400-141713-4	WGWA-7	Total/NA	Water	7470A	
400-141713-5	WGWA-18	Total/NA	Water	7470A	
400-141713-6	FB-1	Total/NA	Water	7470A	
400-141713-7	WGWA-6	Total/NA	Water	7470A	
400-141713-8	WGWA-3	Total/NA	Water	7470A	
MB 400-364220/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-364220/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-141744-G-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-141744-G-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

### Analysis Batch: 364620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141713-1	WGWA-2	Total/NA	Water	7470A	364220
400-141713-2	WGWA-1	Total/NA	Water	7470A	364220
400-141713-3	DUP-1	Total/NA	Water	7470A	364220
400-141713-4	WGWA-7	Total/NA	Water	7470A	364220
400-141713-5	WGWA-18	Total/NA	Water	7470A	364220
400-141713-6	FB-1	Total/NA	Water	7470A	364220
400-141713-7	WGWA-6	Total/NA	Water	7470A	364220
400-141713-8	WGWA-3	Total/NA	Water	7470A	364220
MB 400-364220/14-A	Method Blank	Total/NA	Water	7470A	364220
LCS 400-364220/15-A	Lab Control Sample	Total/NA	Water	7470A	364220
400-141744-G-1-B MS	Matrix Spike	Total/NA	Water	7470A	364220
400-141744-G-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	364220

### Prep Batch: 364825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141713-1	WGWA-2	Total Recoverable	Water	3005A	
400-141713-2	WGWA-1	Total Recoverable	Water	3005A	

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

## Metals (Continued)

### Prep Batch: 364825 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141713-3	DUP-1	Total Recoverable	Water	3005A	
400-141713-4	WGWA-7	Total Recoverable	Water	3005A	
400-141713-5	WGWA-18	Total Recoverable	Water	3005A	
400-141713-6	FB-1	Total Recoverable	Water	3005A	
400-141713-7	WGWA-6	Total Recoverable	Water	3005A	
400-141713-8	WGWA-3	Total Recoverable	Water	3005A	
MB 400-364825/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-364825/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
660-82294-N-1-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
660-82294-N-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Analysis Batch: 365637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141713-1	WGWA-2	Total Recoverable	Water	6020	364825
400-141713-2	WGWA-1	Total Recoverable	Water	6020	364825
400-141713-3	DUP-1	Total Recoverable	Water	6020	364825
400-141713-4	WGWA-7	Total Recoverable	Water	6020	364825
400-141713-5	WGWA-18	Total Recoverable	Water	6020	364825
400-141713-6	FB-1	Total Recoverable	Water	6020	364825
400-141713-7	WGWA-6	Total Recoverable	Water	6020	364825
400-141713-8	WGWA-3	Total Recoverable	Water	6020	364825
MB 400-364825/1-A ^5	Method Blank	Total Recoverable	Water	6020	364825
LCS 400-364825/2-A	Lab Control Sample	Total Recoverable	Water	6020	364825
660-82294-N-1-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	364825
660-82294-N-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	364825

## General Chemistry

### Analysis Batch: 363977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141713-1	WGWA-2	Total/NA	Water	SM 2540C	
400-141713-2	WGWA-1	Total/NA	Water	SM 2540C	
400-141713-4	WGWA-7	Total/NA	Water	SM 2540C	
400-141713-5	WGWA-18	Total/NA	Water	SM 2540C	
400-141713-6	FB-1	Total/NA	Water	SM 2540C	
400-141713-7	WGWA-6	Total/NA	Water	SM 2540C	
400-141713-8	WGWA-3	Total/NA	Water	SM 2540C	
MB 400-363977/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-363977/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-141713-1 DU	WGWA-2	Total/NA	Water	SM 2540C	
400-141713-4 DU	WGWA-7	Total/NA	Water	SM 2540C	

### Analysis Batch: 363978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141713-3	DUP-1	Total/NA	Water	SM 2540C	
MB 400-363978/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-363978/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-141618-A-3 DU	Duplicate	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 400-364214/28**  
**Matrix: Water**  
**Analysis Batch: 364214**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			08/14/17 20:45	1
Fluoride	<0.082		0.20	0.082	mg/L			08/14/17 20:45	1
Sulfate	<0.70		1.0	0.70	mg/L			08/14/17 20:45	1

**Lab Sample ID: LCS 400-364214/29**  
**Matrix: Water**  
**Analysis Batch: 364214**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.71		mg/L		97	90 - 110
Fluoride	10.0	10.1		mg/L		101	90 - 110
Sulfate	10.0	10.4		mg/L		104	90 - 110

**Lab Sample ID: LCSD 400-364214/30**  
**Matrix: Water**  
**Analysis Batch: 364214**

**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	10.0	9.72		mg/L		97	90 - 110	0	15
Fluoride	10.0	10.3		mg/L		103	90 - 110	1	15
Sulfate	10.0	10.4		mg/L		104	90 - 110	0	15

**Lab Sample ID: 400-141785-A-3 MS**  
**Matrix: Water**  
**Analysis Batch: 364214**

**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	66		50.0	114		mg/L		97	80 - 120
Fluoride	<0.41		50.0	51.7		mg/L		103	80 - 120
Sulfate	11		50.0	64.6		mg/L		107	80 - 120

**Lab Sample ID: 400-141785-A-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 364214**

**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	66		50.0	115		mg/L		97	80 - 120	0	20
Fluoride	<0.41		50.0	51.8		mg/L		104	80 - 120	0	20
Sulfate	11		50.0	65.0		mg/L		108	80 - 120	1	20

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 400-364825/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 365637**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 364825**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/19/17 12:04	08/24/17 18:52	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/19/17 12:04	08/24/17 18:52	5

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 400-364825/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 365637**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 364825**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		08/19/17 12:04	08/24/17 18:52	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/17 12:04	08/24/17 18:52	5
Boron	<0.021		0.050	0.021	mg/L		08/19/17 12:04	08/24/17 18:52	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/17 12:04	08/24/17 18:52	5
Calcium	<0.13		0.25	0.13	mg/L		08/19/17 12:04	08/24/17 18:52	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/17 12:04	08/24/17 18:52	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/19/17 12:04	08/24/17 18:52	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/17 12:04	08/24/17 18:52	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/19/17 12:04	08/24/17 18:52	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/19/17 12:04	08/24/17 18:52	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/19/17 12:04	08/24/17 18:52	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/17 12:04	08/24/17 18:52	5

**Lab Sample ID: LCS 400-364825/2-A**  
**Matrix: Water**  
**Analysis Batch: 365637**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 364825**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0541		mg/L		108	80 - 120
Arsenic	0.0500	0.0531		mg/L		106	80 - 120
Barium	0.0500	0.0513		mg/L		103	80 - 120
Beryllium	0.0500	0.0497		mg/L		99	80 - 120
Boron	0.100	0.0985		mg/L		99	80 - 120
Cadmium	0.0500	0.0531		mg/L		106	80 - 120
Calcium	5.00	4.92		mg/L		98	80 - 120
Chromium	0.0500	0.0523		mg/L		105	80 - 120
Cobalt	0.0500	0.0537		mg/L		107	80 - 120
Lead	0.0500	0.0508		mg/L		102	80 - 120
Lithium	0.0500	0.0528		mg/L		106	80 - 120
Molybdenum	0.100	0.106		mg/L		106	80 - 120
Selenium	0.0500	0.0521		mg/L		104	80 - 120
Thallium	0.0100	0.0104		mg/L		104	80 - 120

**Lab Sample ID: 660-82294-N-1-B MS ^5**  
**Matrix: Water**  
**Analysis Batch: 365637**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 364825**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0016	J	0.0500	0.0531		mg/L		103	75 - 125
Arsenic	0.0027		0.0500	0.0546		mg/L		104	75 - 125
Barium	0.015		0.0500	0.0621		mg/L		94	75 - 125
Beryllium	<0.00034		0.0500	0.0493		mg/L		99	75 - 125
Boron	0.37		0.100	0.456		mg/L		86	75 - 125
Cadmium	<0.00034		0.0500	0.0496		mg/L		99	75 - 125
Calcium	150	E	5.00	145	E 4	mg/L		-54	75 - 125
Chromium	<0.0011		0.0500	0.0503		mg/L		101	75 - 125
Cobalt	0.00096	J	0.0500	0.0502		mg/L		98	75 - 125
Lead	<0.00035		0.0500	0.0485		mg/L		97	75 - 125
Lithium	<0.0032		0.0500	0.0543		mg/L		109	75 - 125

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 660-82294-N-1-B MS ^5**  
**Matrix: Water**  
**Analysis Batch: 365637**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 364825**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	0.67		0.100	0.757	4	mg/L		88	75 - 125
Selenium	0.0018		0.0500	0.0526		mg/L		102	75 - 125
Thallium	<0.000085		0.0100	0.00991		mg/L		99	75 - 125

**Lab Sample ID: 660-82294-N-1-C MSD ^5**  
**Matrix: Water**  
**Analysis Batch: 365637**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 364825**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	0.0016	J	0.0500	0.0546		mg/L		106	75 - 125	3	20
Arsenic	0.0027		0.0500	0.0569		mg/L		109	75 - 125	4	20
Barium	0.015		0.0500	0.0659		mg/L		101	75 - 125	6	20
Beryllium	<0.00034		0.0500	0.0505		mg/L		101	75 - 125	2	20
Boron	0.37		0.100	0.480		mg/L		110	75 - 125	5	20
Cadmium	<0.00034		0.0500	0.0524		mg/L		105	75 - 125	5	20
Calcium	150	E	5.00	154	E 4	mg/L		120	75 - 125	6	20
Chromium	<0.0011		0.0500	0.0522		mg/L		104	75 - 125	4	20
Cobalt	0.00096	J	0.0500	0.0527		mg/L		104	75 - 125	5	20
Lead	<0.00035		0.0500	0.0514		mg/L		103	75 - 125	6	20
Lithium	<0.0032		0.0500	0.0550		mg/L		110	75 - 125	1	20
Molybdenum	0.67		0.100	0.802	4	mg/L		133	75 - 125	6	20
Selenium	0.0018		0.0500	0.0539		mg/L		104	75 - 125	3	20
Thallium	<0.000085		0.0100	0.0104		mg/L		104	75 - 125	4	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 400-364220/14-A**  
**Matrix: Water**  
**Analysis Batch: 364620**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 364220**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/15/17 09:08	08/17/17 13:38	1

**Lab Sample ID: LCS 400-364220/15-A**  
**Matrix: Water**  
**Analysis Batch: 364620**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 364220**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.000946		mg/L		94	80 - 120

**Lab Sample ID: 400-141744-G-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 364620**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 364220**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000070		0.00201	0.00187		mg/L		93	80 - 120

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

## Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID: 400-141744-G-1-C MSD**

**Matrix: Water**

**Analysis Batch: 364620**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 364220**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070		0.00201	0.00187		mg/L		93	80 - 120	0	20

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 400-363977/1**

**Matrix: Water**

**Analysis Batch: 363977**

**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			08/12/17 13:45	1

**Lab Sample ID: LCS 400-363977/2**

**Matrix: Water**

**Analysis Batch: 363977**

**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	246		mg/L		84	78 - 122

**Lab Sample ID: 400-141713-1 DU**

**Matrix: Water**

**Analysis Batch: 363977**

**Client Sample ID: WGWA-2**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	62		62.0		mg/L		0	5

**Lab Sample ID: 400-141713-4 DU**

**Matrix: Water**

**Analysis Batch: 363977**

**Client Sample ID: WGWA-7**

**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: MB 400-363978/1**

**Matrix: Water**

**Analysis Batch: 363978**

**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			08/12/17 14:25	1

**Lab Sample ID: LCS 400-363978/2**

**Matrix: Water**

**Analysis Batch: 363978**

**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

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-1  
 SDG: Plant Wansley Ash Pond

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 400-141618-A-3 DU  
 Matrix: Water  
 Analysis Batch: 363978

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	70		72.0		mg/L		3	5

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13



# Chain of Custody Record

**Client Information**  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7299  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

**Sampler:** C. Hurdle (d), T. Payne (p), A. Ellis (M/E)  
**Lab PM:** Whitmore, Cheyenne R  
**E-Mail:** cheyenne.whitmore@testamericainc.com

**Carrier Tracking No(s):**  
**Job #:** 14766

**Analysis Requested**

Field Filtered Sample (Yes or No)  
 Perform MS/MSD (Yes or No)  
 Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470  
 TDS - SM 2640C ; Cl, F, SO4 - EPA 300  
 Radium 226 & 228 - SW-846 9315 & 9320

**Due Date Requested:**  
**TAT Requested (days):**  
**FO #:**  
**WO #:**  
**Project #:**  
**SSOW#:**

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, B=biological, A=air)	Preservation Code	D	I	D	Total Number of Containers	Special Instructions/Note:
WGWA-2	08.08.2017	0857	G	W		1	1	1	3	
WGWA-1	08.08.2017	1031	G	W		1	1	1	3	
WP-1	08.08.2017	--	G	W		1	1	1	3	
WGWA-7	08.08.2017	1325	G	W		1	1	1	3	
WGWA-18	08.08.2017	1306	G	W		1	1	1	3	
FB-1	08.08.2017	1251	G	W		1	1	1	3	
WGWA-6	08.08.2017	1426	G	W		1	1	1	3	
WGWA-3	08.08.2017	1520	G	W		1	1	1	3	

**Possible Hazard Identification**  
 Non-Hazard  
 Flammable  
 Skin Irritant  
 Poison B  
 Unknown  
 Radiological

**Deliverable Requested:** I, II, III, IV, Other (specify)

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  
 Disposal By Lab  
 Archive For \_\_\_\_\_ Months

**Special Instructions/QC Requirements:**

**Empty Kit Relinquished by:** \_\_\_\_\_  
**Relinquished by:** *Harvey Ellis*  
**Relinquished by:** *JK*  
**Relinquished by:** *JK*

**Date:** 08/09/2017 / 1310  
 8/9/17 1630  
 8/10/17 0829

**Received by:** \_\_\_\_\_  
**Received by:** \_\_\_\_\_  
**Received by:** \_\_\_\_\_

**Company:** Southern Company  
**Company:** Southern Company  
**Company:** Southern Company

**Custody Seals Intact:**  Yes  No  
**Custody Seal No.:** 2017

**Cooler Temperature(s) °C and Other Remarks:**  
 3.9 IA-2-TP



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-141713-1  
SDG Number: Plant Wansley Ash Pond

**Login Number: 141713**

**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	3.9°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	

# Accreditation/Certification Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-1  
SDG: Plant Wansley Ash Pond

## Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-18
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	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17 *
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# 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: 400-141713-2

TestAmerica Sample Delivery Group: Plant Wansley Ash Pond

Client Project/Site: CCR - Plant Wansley

Sampling Event: Ash Pond

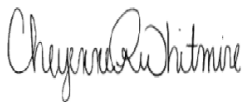
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Joju Abraham



Authorized for release by:

9/8/2017 12:45:51 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 Wansley

TestAmerica Job ID: 400-141713-2  
SDG: Plant Wansley Ash Pond

**Job ID: 400-141713-2**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-141713-2

#### **RAD**

Method(s) PrecSep\_0: Radium 228 Prep Batch 160-322247. 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.

WGWA-2 (400-141713-1), WGWA-1 (400-141713-2), DUP-1 (400-141713-3), WGWA-7 (400-141713-4), WGWA-18 (400-141713-5), FB-1 (400-141713-6), WGWA-6 (400-141713-7) and WGWA-3 (400-141713-8)

Method(s) PrecSep-21: Radium 226 Prep Batch 160-322244. 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.

WGWA-2 (400-141713-1), WGWA-1 (400-141713-2), DUP-1 (400-141713-3), WGWA-7 (400-141713-4), WGWA-18 (400-141713-5), FB-1 (400-141713-6), WGWA-6 (400-141713-7) and WGWA-3 (400-141713-8)



# Method Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-2  
SDG: Plant Wansley Ash Pond

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 Wansley

TestAmerica Job ID: 400-141713-2  
SDG: Plant Wansley Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-141713-1	WGWA-2	Water	08/08/17 08:57	08/10/17 08:29
400-141713-2	WGWA-1	Water	08/08/17 10:31	08/10/17 08:29
400-141713-3	DUP-1	Water	08/08/17 00:00	08/10/17 08:29
400-141713-4	WGWA-7	Water	08/08/17 13:25	08/10/17 08:29
400-141713-5	WGWA-18	Water	08/08/17 13:06	08/10/17 08:29
400-141713-6	FB-1	Water	08/08/17 12:51	08/10/17 08:29
400-141713-7	WGWA-6	Water	08/08/17 14:26	08/10/17 08:29
400-141713-8	WGWA-3	Water	08/08/17 15:20	08/10/17 08:29



# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-2  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-2**

**Lab Sample ID: 400-141713-1**

**Date Collected: 08/08/17 08:57**

**Matrix: Water**

**Date Received: 08/10/17 08:29**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0838		0.0566	0.0571	1.00	0.0728	pCi/L	08/15/17 09:27	09/06/17 08:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					08/15/17 09:27	09/06/17 08:35	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.319	U	0.226	0.228	1.00	0.351	pCi/L	08/15/17 09:53	08/25/17 14:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					08/15/17 09:53	08/25/17 14:35	1
Y Carrier	92.3		40 - 110					08/15/17 09:53	08/25/17 14:35	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.402		0.233	0.235	5.00	0.351	pCi/L		09/08/17 11:51	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-2  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-1**

**Lab Sample ID: 400-141713-2**

**Date Collected: 08/08/17 10:31**

**Matrix: Water**

**Date Received: 08/10/17 08:29**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0526	U	0.0529	0.0531	1.00	0.0821	pCi/L	08/15/17 09:27	09/06/17 08:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					08/15/17 09:27	09/06/17 08:35	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.330	U	0.221	0.223	1.00	0.340	pCi/L	08/15/17 09:53	08/25/17 14:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					08/15/17 09:53	08/25/17 14:36	1
Y Carrier	89.0		40 - 110					08/15/17 09:53	08/25/17 14:36	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
<b>Combined Radium 226 + 228</b>	<b>0.382</b>		0.227	0.229	5.00	0.340	pCi/L		09/08/17 11:51	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: DUP-1**

**Date Collected: 08/08/17 00:00**

**Date Received: 08/10/17 08:29**

**Lab Sample ID: 400-141713-3**

**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	0.0355	U	0.0515	0.0516	1.00	0.0880	pCi/L	08/15/17 09:27	09/06/17 08:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					08/15/17 09:27	09/06/17 08:35	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.345	U	0.299	0.301	1.00	0.480	pCi/L	08/15/17 09:53	08/25/17 14:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					08/15/17 09:53	08/25/17 14:36	1
Y Carrier	74.8		40 - 110					08/15/17 09:53	08/25/17 14:36	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.380	U	0.304	0.305	5.00	0.480	pCi/L		09/08/17 11:51	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-2  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-7**

**Lab Sample ID: 400-141713-4**

**Date Collected: 08/08/17 13:25**

**Matrix: Water**

**Date Received: 08/10/17 08:29**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0270	U	0.0497	0.0498	1.00	0.0886	pCi/L	08/15/17 09:27	09/06/17 08:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					08/15/17 09:27	09/06/17 08:35	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.193	U	0.247	0.248	1.00	0.410	pCi/L	08/15/17 09:53	08/25/17 14:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					08/15/17 09:53	08/25/17 14:36	1
Y Carrier	86.4		40 - 110					08/15/17 09:53	08/25/17 14:36	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.219	U	0.252	0.253	5.00	0.410	pCi/L		09/08/17 11:51	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-18**

**Date Collected: 08/08/17 13:06**

**Date Received: 08/10/17 08:29**

**Lab Sample ID: 400-141713-5**

**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	0.0929		0.0592	0.0598	1.00	0.0746	pCi/L	08/15/17 09:27	09/06/17 08:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					08/15/17 09:27	09/06/17 08:36	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.00870	U	0.192	0.192	1.00	0.351	pCi/L	08/15/17 09:53	08/25/17 14:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					08/15/17 09:53	08/25/17 14:36	1
Y Carrier	87.1		40 - 110					08/15/17 09:53	08/25/17 14:36	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0842	U	0.201	0.201	5.00	0.351	pCi/L		09/08/17 11:51	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-2  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: FB-1**  
**Date Collected: 08/08/17 12:51**  
**Date Received: 08/10/17 08:29**

**Lab Sample ID: 400-141713-6**  
**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	0.122		0.0665	0.0674	1.00	0.0812	pCi/L	08/15/17 09:27	09/06/17 08:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					08/15/17 09:27	09/06/17 08:36	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0102	U	0.203	0.203	1.00	0.366	pCi/L	08/15/17 09:53	08/25/17 14:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					08/15/17 09:53	08/25/17 14:36	1
Y Carrier	89.7		40 - 110					08/15/17 09:53	08/25/17 14:36	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.111	U	0.213	0.214	5.00	0.366	pCi/L		09/08/17 11:51	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-2  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-141713-7**

**Date Collected: 08/08/17 14:26**

**Matrix: Water**

**Date Received: 08/10/17 08:29**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.88		0.266	0.371	1.00	0.0698	pCi/L	08/15/17 09:27	09/06/17 08:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					08/15/17 09:27	09/06/17 08:36	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.33		0.473	0.618	1.00	0.389	pCi/L	08/15/17 09:53	08/25/17 14:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					08/15/17 09:53	08/25/17 14:37	1
Y Carrier	88.2		40 - 110					08/15/17 09:53	08/25/17 14:37	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	7.21		0.543	0.721	5.00	0.389	pCi/L		09/08/17 11:51	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-2  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-3**

**Lab Sample ID: 400-141713-8**

**Date Collected: 08/08/17 15:20**

**Matrix: Water**

**Date Received: 08/10/17 08:29**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0185	U	0.0259	0.0259	1.00	0.0727	pCi/L	08/15/17 09:27	09/06/17 11:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					08/15/17 09:27	09/06/17 11:30	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.145	U	0.197	0.198	1.00	0.329	pCi/L	08/15/17 09:53	08/25/17 14:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					08/15/17 09:53	08/25/17 14:37	1
Y Carrier	86.0		40 - 110					08/15/17 09:53	08/25/17 14:37	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.127	U	0.199	0.199	5.00	0.329	pCi/L		09/08/17 11:51	1



# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-2  
SDG: Plant Wansley Ash Pond

## Qualifiers

### Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-2**

**Date Collected: 08/08/17 08:57**

**Date Received: 08/10/17 08:29**

**Lab Sample ID: 400-141713-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322244	08/15/17 09:27	LDE	TAL SL
Total/NA	Analysis	9315		1	325782	09/06/17 08:35	ALD	TAL SL
Total/NA	Prep	PrecSep_0			322247	08/15/17 09:53	LDE	TAL SL
Total/NA	Analysis	9320		1	324413	08/25/17 14:35	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326387	09/08/17 11:51	RTM	TAL SL

**Client Sample ID: WGWA-1**

**Date Collected: 08/08/17 10:31**

**Date Received: 08/10/17 08:29**

**Lab Sample ID: 400-141713-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322244	08/15/17 09:27	LDE	TAL SL
Total/NA	Analysis	9315		1	325782	09/06/17 08:35	ALD	TAL SL
Total/NA	Prep	PrecSep_0			322247	08/15/17 09:53	LDE	TAL SL
Total/NA	Analysis	9320		1	324413	08/25/17 14:36	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326387	09/08/17 11:51	RTM	TAL SL

**Client Sample ID: DUP-1**

**Date Collected: 08/08/17 00:00**

**Date Received: 08/10/17 08:29**

**Lab Sample ID: 400-141713-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322244	08/15/17 09:27	LDE	TAL SL
Total/NA	Analysis	9315		1	325782	09/06/17 08:35	ALD	TAL SL
Total/NA	Prep	PrecSep_0			322247	08/15/17 09:53	LDE	TAL SL
Total/NA	Analysis	9320		1	324413	08/25/17 14:36	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326387	09/08/17 11:51	RTM	TAL SL

**Client Sample ID: WGWA-7**

**Date Collected: 08/08/17 13:25**

**Date Received: 08/10/17 08:29**

**Lab Sample ID: 400-141713-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322244	08/15/17 09:27	LDE	TAL SL
Total/NA	Analysis	9315		1	325782	09/06/17 08:35	ALD	TAL SL
Total/NA	Prep	PrecSep_0			322247	08/15/17 09:53	LDE	TAL SL
Total/NA	Analysis	9320		1	324413	08/25/17 14:36	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326387	09/08/17 11:51	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-18**

**Lab Sample ID: 400-141713-5**

**Date Collected: 08/08/17 13:06**

**Matrix: Water**

**Date Received: 08/10/17 08:29**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322244	08/15/17 09:27	LDE	TAL SL
Total/NA	Analysis	9315		1	325782	09/06/17 08:36	ALD	TAL SL
Total/NA	Prep	PrecSep_0			322247	08/15/17 09:53	LDE	TAL SL
Total/NA	Analysis	9320		1	324413	08/25/17 14:36	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326387	09/08/17 11:51	RTM	TAL SL

**Client Sample ID: FB-1**

**Lab Sample ID: 400-141713-6**

**Date Collected: 08/08/17 12:51**

**Matrix: Water**

**Date Received: 08/10/17 08:29**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322244	08/15/17 09:27	LDE	TAL SL
Total/NA	Analysis	9315		1	325782	09/06/17 08:36	ALD	TAL SL
Total/NA	Prep	PrecSep_0			322247	08/15/17 09:53	LDE	TAL SL
Total/NA	Analysis	9320		1	324413	08/25/17 14:36	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326387	09/08/17 11:51	RTM	TAL SL

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-141713-7**

**Date Collected: 08/08/17 14:26**

**Matrix: Water**

**Date Received: 08/10/17 08:29**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322244	08/15/17 09:27	LDE	TAL SL
Total/NA	Analysis	9315		1	325782	09/06/17 08:36	ALD	TAL SL
Total/NA	Prep	PrecSep_0			322247	08/15/17 09:53	LDE	TAL SL
Total/NA	Analysis	9320		1	324247	08/25/17 14:37	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326387	09/08/17 11:51	RTM	TAL SL

**Client Sample ID: WGWA-3**

**Lab Sample ID: 400-141713-8**

**Date Collected: 08/08/17 15:20**

**Matrix: Water**

**Date Received: 08/10/17 08:29**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322244	08/15/17 09:27	LDE	TAL SL
Total/NA	Analysis	9315		1	325782	09/06/17 11:30	ALD	TAL SL
Total/NA	Prep	PrecSep_0			322247	08/15/17 09:53	LDE	TAL SL
Total/NA	Analysis	9320		1	324247	08/25/17 14:37	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326387	09/08/17 11:51	RTM	TAL SL

## Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-2  
 SDG: Plant Wansley Ash Pond

## Rad

### Prep Batch: 322244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141713-1	WGWA-2	Total/NA	Water	PrecSep-21	
400-141713-2	WGWA-1	Total/NA	Water	PrecSep-21	
400-141713-3	DUP-1	Total/NA	Water	PrecSep-21	
400-141713-4	WGWA-7	Total/NA	Water	PrecSep-21	
400-141713-5	WGWA-18	Total/NA	Water	PrecSep-21	
400-141713-6	FB-1	Total/NA	Water	PrecSep-21	
400-141713-7	WGWA-6	Total/NA	Water	PrecSep-21	
400-141713-8	WGWA-3	Total/NA	Water	PrecSep-21	
MB 160-322244/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-322244/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-322244/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

### Prep Batch: 322247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141713-1	WGWA-2	Total/NA	Water	PrecSep_0	
400-141713-2	WGWA-1	Total/NA	Water	PrecSep_0	
400-141713-3	DUP-1	Total/NA	Water	PrecSep_0	
400-141713-4	WGWA-7	Total/NA	Water	PrecSep_0	
400-141713-5	WGWA-18	Total/NA	Water	PrecSep_0	
400-141713-6	FB-1	Total/NA	Water	PrecSep_0	
400-141713-7	WGWA-6	Total/NA	Water	PrecSep_0	
400-141713-8	WGWA-3	Total/NA	Water	PrecSep_0	
MB 160-322247/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-322247/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-322247/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-2  
SDG: Plant Wansley Ash Pond

## Method: 9315 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-322244/1-A**  
**Matrix: Water**  
**Analysis Batch: 325781**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 322244**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.04184	U	0.0476	0.0477	1.00	0.0759	pCi/L	08/15/17 09:27	09/06/17 08:33	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					08/15/17 09:27	09/06/17 08:33	1

**Lab Sample ID: LCS 160-322244/2-A**  
**Matrix: Water**  
**Analysis Batch: 325781**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 322244**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	9.60	9.090		0.952	1.00	0.0875	pCi/L	95	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	102		40 - 110						

**Lab Sample ID: LCSD 160-322244/3-A**  
**Matrix: Water**  
**Analysis Batch: 325781**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 322244**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	9.60	9.813		1.02	1.00	0.0783	pCi/L	102	68 - 137	0.37	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	99.7		40 - 110								

## Method: 9320 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-322247/1-A**  
**Matrix: Water**  
**Analysis Batch: 324413**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 322247**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.5445		0.249	0.254	1.00	0.361	pCi/L	08/15/17 09:53	08/25/17 14:25	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					08/15/17 09:53	08/25/17 14:25	1
Y Carrier	88.2		40 - 110					08/15/17 09:53	08/25/17 14:25	1

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-2  
 SDG: Plant Wansley Ash Pond

## Method: 9320 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-322247/2-A**  
**Matrix: Water**  
**Analysis Batch: 324413**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 322247**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.0	13.32		1.43	1.00	0.329	pCi/L	102	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	102		40 - 110
Y Carrier	92.3		40 - 110

**Lab Sample ID: LCSD 160-322247/3-A**  
**Matrix: Water**  
**Analysis Batch: 324413**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 322247**

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	13.0	13.64		1.47	1.00	0.359	pCi/L	105	56 - 140	0.11	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	99.7		40 - 110
Y Carrier	86.7		40 - 110

# Chain of Custody Record

**Client Information**  
 Client Contact: Joju Abraham  
 Company: Southern Company  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7299  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

**Sampler:** C. Hurdle (d), T. Payne (p), A. Ellis (M/E)  
**Lab PM:** Whitmore, Cheyenne R  
**E-Mail:** cheyenne.whitmore@testamericainc.com

**Carrier Tracking No(s):**  
**Job #:** 14766

**Analysis Requested**

Due Date Requested:  
 TAT Requested (days):  
 FO #:  
 WO #:  
 Project #:  
 SSOV#:

Field Filtered Sample (Yes or No)  Yes  No  
 Perform MS/MSD (Yes or No)  Yes  No  
 Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470  
 TDS - SM 2640C; Cl, F, SO4 - EPA 300  
 Radium 226 & 228 - SW-846 9315 & 9320

Special Instructions/Note:  
 Total Number of Containers: 3

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 - EDTA  
 M - Hexane  
 N - None  
 O - AsNaO2  
 P - Na2O4S  
 Q - Na2SO3  
 R - Na2S2O3  
 S - H2SO4  
 T - TSP Dodecahydrate  
 U - Acetone  
 V - MCAA  
 W - ph 4-5  
 Z - other (specify)

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, B=biological, A=air)	Preservation Code	D	I	D	Total Number of Containers	Special Instructions/Note
WGWA-2	08.08.2017	0857	G	W		1	1	1	3	
WGWA-1	08.08.2017	1031	G	W		1	1	1	3	
WP-1	08.08.2017	--	G	W		1	1	1	3	
WGWA-7	08.08.2017	1325	G	W		1	1	1	3	
WGWA-18	08.08.2017	1306	G	W		1	1	1	3	
FB-1	08.08.2017	1251	G	W		1	1	1	3	
WGWA-6	08.08.2017	1426	G	W		1	1	1	3	
WGWA-3	08.08.2017	1520	G	W		1	1	1	3	

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: *Harvey Ellis* Date/Time: 08/09/2017 11310 Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: 8/9/17 1630 Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: 8-10-17 0829 Company: \_\_\_\_\_

Received by: \_\_\_\_\_ Date/Time: 8/9/17 1315 Company: TA  
 Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Received by: \_\_\_\_\_ Date/Time: 8-10-17 0829 Company: TA

Cooler Temperature(s) °C and Other Remarks:  
 3.9 IA-2-TP

Custody Seals Intact:  Yes  No  
 Custody Seal No.: \_\_\_\_\_



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-141713-2  
SDG Number: Plant Wansley Ash Pond

**Login Number: 141713**

**List Number: 1**

**Creator: Siddoway, Benjamin**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.9°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 Wansley

TestAmerica Job ID: 400-141713-2  
SDG: Plant Wansley Ash Pond

## Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17 *
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

## Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-18
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-18
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17 *
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-18
Missouri	State Program	7	780	06-30-18
Nevada	State Program	9	MO000542017-1	07-31-18
New Jersey	NELAP	2	MO002	06-30-18
New York	NELAP	2	11616	03-31-18

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# Accreditation/Certification Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141713-2  
SDG: Plant Wansley Ash Pond

## 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	08-31-18
Pennsylvania	NELAP	3	68-00540	02-21-18
South Carolina	State Program	4	85002001	06-30-17 *
Texas	NELAP	6	T104704193-17-11	07-31-18
US Fish & Wildlife	Federal		058448	08-31-18
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-18
Virginia	NELAP	3	460230	06-14-18
Washington	State Program	10	C592	08-30-17 *
West Virginia DEP	State Program	3	381	08-31-18

\* 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: 400-141841-1

TestAmerica Sample Delivery Group: Plant Wansley Ash Pond

Client Project/Site: CCR - Plant Wansley

Sampling Event: Ash Pond

For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Joju Abraham



Authorized for release by:

8/29/2017 5:34:02 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

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**Job ID: 400-141841-1**

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**Laboratory: TestAmerica Pensacola**

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**Narrative**

**Job Narrative  
400-141841-1**

**HPLC/IC**

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: WGWC-16 (400-141841-10) and WGWC-8 (400-141841-11). Elevated reporting limits (RLs) are provided.

**Metals**

Method(s) 6020: The following sample was diluted to bring the concentration of target analytes within the calibration range: WGWC-16 (400-141841-10). Elevated reporting limits (RLs) are provided.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# Detection Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

## Client Sample ID: DUP-2

## Lab Sample ID: 400-141841-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.1		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	2.3		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.030		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	3.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0010	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0011	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00043	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	38		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-12

## Lab Sample ID: 400-141841-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.11	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	16		1.0	0.70	mg/L	1		300.0	Total/NA
Antimony	0.0023	J	0.0025	0.0010	mg/L	5		6020	Total Recoverable
Arsenic	0.00048	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.017		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	15		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00049	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0064		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0046	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	96		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-11

## Lab Sample ID: 400-141841-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.1		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	2.3		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.030		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	3.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0011	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0011	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00049	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 Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

## Client Sample ID: WGWC-10

## Lab Sample ID: 400-141841-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.20		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	2.2		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.038		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	8.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0016	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.011		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.00093	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00031	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	38		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-13

## Lab Sample ID: 400-141841-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.32		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	8.1		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.055		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	7.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00040	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Molybdenum	0.0028	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

## Client Sample ID: WGWA-5

## Lab Sample ID: 400-141841-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.9		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.75	J	1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.016		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.3		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0025		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

## Client Sample ID: WGWA-4

## Lab Sample ID: 400-141841-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.2		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.14	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	7.3		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.0056		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 Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

## Client Sample ID: WGWA-4 (Continued)

## Lab Sample ID: 400-141841-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	15		0.25	0.13	mg/L	5		6020	Total
Lithium	0.0042	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	92		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-17

## Lab Sample ID: 400-141841-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.19	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	6.5		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.017		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	11		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	0.0067		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0066	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

## Client Sample ID: WGWC-15

## Lab Sample ID: 400-141841-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.6		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.91		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	35		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0017		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.020		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	30		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0068		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0042	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	180		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-16

## Lab Sample ID: 400-141841-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	330		20	18	mg/L	20		300.0	Total/NA
Fluoride	0.18	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	780		20	14	mg/L	20		300.0	Total/NA
Arsenic	0.0013		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.069		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.00054	J	0.0025	0.00034	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 Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

## Client Sample ID: WGWC-16 (Continued)

## Lab Sample ID: 400-141841-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.016		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.013		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.016		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00020	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	6.3		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	350		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	1900		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-8

## Lab Sample ID: 400-141841-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	48		5.0	4.5	mg/L	5		300.0	Total/NA
Fluoride	0.37		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	180		5.0	3.5	mg/L	5		300.0	Total/NA
Barium	0.0025		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.0017	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	53		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.013		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.0031		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - RA	1.8		0.050	0.021	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	380		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-9

## Lab Sample ID: 400-141841-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.3		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	1.6		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	38		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.00053	J	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	7.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.038		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0046	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0021		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Boron - RA	0.29		0.050	0.021	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	130		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 Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

## Client Sample ID: FB-2

## Lab Sample ID: 400-141841-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.035	J	0.050	0.021	mg/L	5		6020	Total Recoverable

## Client Sample ID: FERB-1

## Lab Sample ID: 400-141841-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.022	J	0.050	0.021	mg/L	5		6020	Total Recoverable

## Client Sample ID: WGWC-19

## Lab Sample ID: 400-141841-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.5		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.42		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	3.7		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.0012	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	8.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00049	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.056		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0016	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.00036	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	66		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FERB-2

## Lab Sample ID: 400-141841-16

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Method Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN

### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-141841-1	DUP-2	Water	08/10/17 00:00	08/12/17 08:34
400-141841-2	WGWC-12	Water	08/10/17 11:50	08/12/17 08:34
400-141841-3	WGWC-11	Water	08/10/17 09:45	08/12/17 08:34
400-141841-4	WGWC-10	Water	08/10/17 14:10	08/12/17 08:34
400-141841-5	WGWC-13	Water	08/09/17 14:15	08/12/17 08:34
400-141841-6	WGWA-5	Water	08/09/17 10:15	08/12/17 08:34
400-141841-7	WGWA-4	Water	08/09/17 11:25	08/12/17 08:34
400-141841-8	WGWC-17	Water	08/09/17 13:15	08/12/17 08:34
400-141841-9	WGWC-15	Water	08/09/17 14:19	08/12/17 08:34
400-141841-10	WGWC-16	Water	08/09/17 11:53	08/12/17 08:34
400-141841-11	WGWC-8	Water	08/10/17 12:37	08/12/17 08:34
400-141841-12	WGWC-9	Water	08/10/17 10:07	08/12/17 08:34
400-141841-13	FB-2	Water	08/09/17 14:23	08/12/17 08:34
400-141841-14	FERB-1	Water	08/09/17 11:30	08/12/17 08:34
400-141841-15	WGWC-19	Water	08/10/17 11:47	08/12/17 08:34
400-141841-16	FERB-2	Water	08/10/17 10:15	08/12/17 08:34

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: DUP-2**

**Date Collected: 08/10/17 00:00**

**Date Received: 08/12/17 08:34**

**Lab Sample ID: 400-141841-1**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.1</b>		1.0	0.89	mg/L			08/15/17 12:45	1
Fluoride	<0.082		0.20	0.082	mg/L			08/15/17 12:45	1
<b>Sulfate</b>	<b>2.3</b>		1.0	0.70	mg/L			08/15/17 12:45	1

### 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		08/21/17 11:47	08/24/17 20:22	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/21/17 11:47	08/24/17 20:22	5
<b>Barium</b>	<b>0.030</b>		0.0025	0.00049	mg/L		08/21/17 11:47	08/24/17 20:22	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 20:22	5
Boron	<0.021		0.050	0.021	mg/L		08/21/17 11:47	08/24/17 20:22	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 20:22	5
<b>Calcium</b>	<b>3.5</b>		0.25	0.13	mg/L		08/21/17 11:47	08/24/17 20:22	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/21/17 11:47	08/24/17 20:22	5
<b>Cobalt</b>	<b>0.0010</b>	<b>J</b>	0.0025	0.00040	mg/L		08/21/17 11:47	08/24/17 20:22	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/21/17 11:47	08/24/17 20:22	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/21/17 11:47	08/24/17 20:22	5
<b>Molybdenum</b>	<b>0.0011</b>	<b>J</b>	0.015	0.00085	mg/L		08/21/17 11:47	08/24/17 20:22	5
<b>Selenium</b>	<b>0.00043</b>	<b>J</b>	0.0013	0.00024	mg/L		08/21/17 11:47	08/24/17 20:22	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/21/17 11:47	08/24/17 20:22	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		08/20/17 12:47	08/22/17 12:05	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>38</b>		5.0	3.4	mg/L			08/13/17 09:17	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-141841-2**

Date Collected: 08/10/17 11:50

Matrix: Water

Date Received: 08/12/17 08:34

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.4		1.0	0.89	mg/L			08/15/17 13:53	1
Fluoride	0.11	J	0.20	0.082	mg/L			08/15/17 13:53	1
Sulfate	16		1.0	0.70	mg/L			08/15/17 13:53	1

### Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0023	J	0.0025	0.0010	mg/L		08/21/17 11:47	08/24/17 20:35	5
Arsenic	0.00048	J	0.0013	0.00046	mg/L		08/21/17 11:47	08/24/17 20:35	5
Barium	0.017		0.0025	0.00049	mg/L		08/21/17 11:47	08/24/17 20:35	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 20:35	5
Boron	<0.021		0.050	0.021	mg/L		08/21/17 11:47	08/24/17 20:35	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 20:35	5
Calcium	15		0.25	0.13	mg/L		08/21/17 11:47	08/24/17 20:35	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/21/17 11:47	08/24/17 20:35	5
Cobalt	0.00049	J	0.0025	0.00040	mg/L		08/21/17 11:47	08/24/17 20:35	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/21/17 11:47	08/24/17 20:35	5
Lithium	0.0064		0.0050	0.0032	mg/L		08/21/17 11:47	08/24/17 20:35	5
Molybdenum	0.0046	J	0.015	0.00085	mg/L		08/21/17 11:47	08/24/17 20:35	5
Selenium	0.0021		0.0013	0.00024	mg/L		08/21/17 11:47	08/24/17 20:35	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/21/17 11:47	08/24/17 20:35	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		08/20/17 12:47	08/22/17 12:11	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	96		5.0	3.4	mg/L			08/16/17 13:32	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-141841-3**

**Date Collected: 08/10/17 09:45**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.1</b>		1.0	0.89	mg/L			08/15/17 14:16	1
Fluoride	<0.082		0.20	0.082	mg/L			08/15/17 14:16	1
<b>Sulfate</b>	<b>2.3</b>		1.0	0.70	mg/L			08/15/17 14:16	1

### 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		08/21/17 11:47	08/24/17 20:40	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/21/17 11:47	08/24/17 20:40	5
<b>Barium</b>	<b>0.030</b>		0.0025	0.00049	mg/L		08/21/17 11:47	08/24/17 20:40	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 20:40	5
Boron	<0.021		0.050	0.021	mg/L		08/21/17 11:47	08/24/17 20:40	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 20:40	5
<b>Calcium</b>	<b>3.5</b>		0.25	0.13	mg/L		08/21/17 11:47	08/24/17 20:40	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/21/17 11:47	08/24/17 20:40	5
<b>Cobalt</b>	<b>0.0011</b>	<b>J</b>	0.0025	0.00040	mg/L		08/21/17 11:47	08/24/17 20:40	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/21/17 11:47	08/24/17 20:40	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/21/17 11:47	08/24/17 20:40	5
<b>Molybdenum</b>	<b>0.0011</b>	<b>J</b>	0.015	0.00085	mg/L		08/21/17 11:47	08/24/17 20:40	5
<b>Selenium</b>	<b>0.00049</b>	<b>J</b>	0.0013	0.00024	mg/L		08/21/17 11:47	08/24/17 20:40	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/21/17 11:47	08/24/17 20:40	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		08/20/17 12:47	08/22/17 12:13	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>30</b>		5.0	3.4	mg/L			08/16/17 13:32	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-141841-4**

**Date Collected: 08/10/17 14:10**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4		1.0	0.89	mg/L			08/15/17 14:39	1
Fluoride	0.20		0.20	0.082	mg/L			08/15/17 14:39	1
Sulfate	2.2		1.0	0.70	mg/L			08/15/17 14:39	1

### 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		08/21/17 11:47	08/24/17 20:44	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/21/17 11:47	08/24/17 20:44	5
Barium	0.038		0.0025	0.00049	mg/L		08/21/17 11:47	08/24/17 20:44	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 20:44	5
Boron	<0.021		0.050	0.021	mg/L		08/21/17 11:47	08/24/17 20:44	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 20:44	5
Calcium	8.1		0.25	0.13	mg/L		08/21/17 11:47	08/24/17 20:44	5
Chromium	0.0016	J	0.0025	0.0011	mg/L		08/21/17 11:47	08/24/17 20:44	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/21/17 11:47	08/24/17 20:44	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/21/17 11:47	08/24/17 20:44	5
Lithium	0.011		0.0050	0.0032	mg/L		08/21/17 11:47	08/24/17 20:44	5
Molybdenum	0.00093	J	0.015	0.00085	mg/L		08/21/17 11:47	08/24/17 20:44	5
Selenium	0.00031	J	0.0013	0.00024	mg/L		08/21/17 11:47	08/24/17 20:44	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/21/17 11:47	08/24/17 20:44	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		08/20/17 12:47	08/22/17 12:15	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	38		5.0	3.4	mg/L			08/16/17 13:32	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-141841-5**

**Date Collected: 08/09/17 14:15**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4		1.0	0.89	mg/L			08/15/17 15:01	1
Fluoride	0.32		0.20	0.082	mg/L			08/15/17 15:01	1
Sulfate	8.1		1.0	0.70	mg/L			08/15/17 15:01	1

**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		08/21/17 11:47	08/24/17 21:07	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/21/17 11:47	08/24/17 21:07	5
Barium	0.055		0.0025	0.00049	mg/L		08/21/17 11:47	08/24/17 21:07	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 21:07	5
Boron	<0.021		0.050	0.021	mg/L		08/21/17 11:47	08/24/17 21:07	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 21:07	5
Calcium	7.0		0.25	0.13	mg/L		08/21/17 11:47	08/24/17 21:07	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/21/17 11:47	08/24/17 21:07	5
Cobalt	0.00040	J	0.0025	0.00040	mg/L		08/21/17 11:47	08/24/17 21:07	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/21/17 11:47	08/24/17 21:07	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/21/17 11:47	08/24/17 21:07	5
Molybdenum	0.0028	J	0.015	0.00085	mg/L		08/21/17 11:47	08/24/17 21:07	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/21/17 11:47	08/24/17 21:07	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/21/17 11:47	08/24/17 21:07	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		08/20/17 12:47	08/22/17 12:17	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	120		5.0	3.4	mg/L			08/13/17 09:17	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-5**

**Lab Sample ID: 400-141841-6**

**Date Collected: 08/09/17 10:15**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>1.9</b>		1.0	0.89	mg/L			08/15/17 16:10	1
Fluoride	<0.082		0.20	0.082	mg/L			08/15/17 16:10	1
<b>Sulfate</b>	<b>0.75</b>	<b>J</b>	1.0	0.70	mg/L			08/15/17 16:10	1

### 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		08/21/17 11:47	08/24/17 21:12	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/21/17 11:47	08/24/17 21:12	5
<b>Barium</b>	<b>0.016</b>		0.0025	0.00049	mg/L		08/21/17 11:47	08/24/17 21:12	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 21:12	5
Boron	<0.021		0.050	0.021	mg/L		08/21/17 11:47	08/24/17 21:12	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 21:12	5
<b>Calcium</b>	<b>1.3</b>		0.25	0.13	mg/L		08/21/17 11:47	08/24/17 21:12	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/21/17 11:47	08/24/17 21:12	5
<b>Cobalt</b>	<b>0.0025</b>		0.0025	0.00040	mg/L		08/21/17 11:47	08/24/17 21:12	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/21/17 11:47	08/24/17 21:12	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/21/17 11:47	08/24/17 21:12	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/21/17 11:47	08/24/17 21:12	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/21/17 11:47	08/24/17 21:12	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/21/17 11:47	08/24/17 21:12	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		08/20/17 12:47	08/22/17 12:29	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>20</b>		5.0	3.4	mg/L			08/13/17 09:17	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-141841-7**

**Date Collected: 08/09/17 11:25**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.2		1.0	0.89	mg/L			08/15/17 16:33	1
Fluoride	0.14	J	0.20	0.082	mg/L			08/15/17 16:33	1
Sulfate	7.3		1.0	0.70	mg/L			08/15/17 16:33	1

### 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		08/21/17 11:47	08/24/17 21:16	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/21/17 11:47	08/24/17 21:16	5
Barium	0.0056		0.0025	0.00049	mg/L		08/21/17 11:47	08/24/17 21:16	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 21:16	5
Boron	<0.021		0.050	0.021	mg/L		08/21/17 11:47	08/24/17 21:16	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 21:16	5
Calcium	15		0.25	0.13	mg/L		08/21/17 11:47	08/24/17 21:16	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/21/17 11:47	08/24/17 21:16	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/21/17 11:47	08/24/17 21:16	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/21/17 11:47	08/24/17 21:16	5
Lithium	0.0042	J	0.0050	0.0032	mg/L		08/21/17 11:47	08/24/17 21:16	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/21/17 11:47	08/24/17 21:16	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/21/17 11:47	08/24/17 21:16	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/21/17 11:47	08/24/17 21:16	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		08/20/17 12:47	08/22/17 12:31	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	92		5.0	3.4	mg/L			08/13/17 09:17	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-17**

**Date Collected: 08/09/17 13:15**

**Date Received: 08/12/17 08:34**

**Lab Sample ID: 400-141841-8**

**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4		1.0	0.89	mg/L			08/15/17 16:56	1
Fluoride	0.19	J	0.20	0.082	mg/L			08/15/17 16:56	1
Sulfate	6.5		1.0	0.70	mg/L			08/15/17 16:56	1

**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		08/21/17 11:47	08/24/17 21:21	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/21/17 11:47	08/24/17 21:21	5
Barium	0.017		0.0025	0.00049	mg/L		08/21/17 11:47	08/24/17 21:21	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 21:21	5
Boron	<0.021		0.050	0.021	mg/L		08/21/17 11:47	08/24/17 21:21	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 21:21	5
Calcium	11		0.25	0.13	mg/L		08/21/17 11:47	08/24/17 21:21	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/21/17 11:47	08/24/17 21:21	5
Cobalt	0.0011	J	0.0025	0.00040	mg/L		08/21/17 11:47	08/24/17 21:21	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/21/17 11:47	08/24/17 21:21	5
Lithium	0.0067		0.0050	0.0032	mg/L		08/21/17 11:47	08/24/17 21:21	5
Molybdenum	0.0066	J	0.015	0.00085	mg/L		08/21/17 11:47	08/24/17 21:21	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/21/17 11:47	08/24/17 21:21	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/21/17 11:47	08/24/17 21:21	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		08/20/17 12:47	08/22/17 12:33	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	92		5.0	3.4	mg/L			08/13/17 09:17	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-15**

**Date Collected: 08/09/17 14:19**

**Date Received: 08/12/17 08:34**

**Lab Sample ID: 400-141841-9**

**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.6		1.0	0.89	mg/L			08/15/17 17:18	1
Fluoride	0.91		0.20	0.082	mg/L			08/15/17 17:18	1
Sulfate	35		1.0	0.70	mg/L			08/15/17 17:18	1

**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		08/21/17 11:47	08/24/17 21:25	5
Arsenic	0.0017		0.0013	0.00046	mg/L		08/21/17 11:47	08/24/17 21:25	5
Barium	0.020		0.0025	0.00049	mg/L		08/21/17 11:47	08/24/17 21:25	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 21:25	5
Boron	<0.021		0.050	0.021	mg/L		08/21/17 11:47	08/24/17 21:25	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 21:25	5
Calcium	30		0.25	0.13	mg/L		08/21/17 11:47	08/24/17 21:25	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/21/17 11:47	08/24/17 21:25	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/21/17 11:47	08/24/17 21:25	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/21/17 11:47	08/24/17 21:25	5
Lithium	0.0068		0.0050	0.0032	mg/L		08/21/17 11:47	08/24/17 21:25	5
Molybdenum	0.0042	J	0.015	0.00085	mg/L		08/21/17 11:47	08/24/17 21:25	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/21/17 11:47	08/24/17 21:25	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/21/17 11:47	08/24/17 21:25	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		08/20/17 12:47	08/22/17 12:35	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	180		5.0	3.4	mg/L			08/13/17 09:17	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-141841-10**

**Date Collected: 08/09/17 11:53**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	330		20	18	mg/L			08/16/17 12:15	20
Fluoride	0.18	J	0.20	0.082	mg/L			08/15/17 17:41	1
Sulfate	780		20	14	mg/L			08/16/17 12:15	20

### 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		08/21/17 11:47	08/24/17 21:30	5
Arsenic	0.0013		0.0013	0.00046	mg/L		08/21/17 11:47	08/24/17 21:30	5
Barium	0.069		0.0025	0.00049	mg/L		08/21/17 11:47	08/24/17 21:30	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 21:30	5
Cadmium	0.00054	J	0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 21:30	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/21/17 11:47	08/24/17 21:30	5
Cobalt	0.016		0.0025	0.00040	mg/L		08/21/17 11:47	08/24/17 21:30	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/21/17 11:47	08/24/17 21:30	5
Lithium	0.013		0.0050	0.0032	mg/L		08/21/17 11:47	08/24/17 21:30	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/21/17 11:47	08/24/17 21:30	5
Selenium	0.016		0.0013	0.00024	mg/L		08/21/17 11:47	08/24/17 21:30	5
Thallium	0.00020	J	0.00050	0.000085	mg/L		08/21/17 11:47	08/24/17 21:30	5

### Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.3		0.50	0.21	mg/L		08/21/17 11:47	08/27/17 19:16	50
Calcium	350		2.5	1.3	mg/L		08/21/17 11:47	08/27/17 19:16	50

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/20/17 12:47	08/22/17 12:36	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1900		5.0	3.4	mg/L			08/13/17 09:17	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-141841-11**

**Date Collected: 08/10/17 12:37**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	48		5.0	4.5	mg/L			08/16/17 13:24	5
Fluoride	0.37		0.20	0.082	mg/L			08/15/17 18:04	1
Sulfate	180		5.0	3.5	mg/L			08/16/17 13:24	5

### 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		08/21/17 11:47	08/24/17 21:35	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/21/17 11:47	08/24/17 21:35	5
Barium	0.0025		0.0025	0.00049	mg/L		08/21/17 11:47	08/24/17 21:35	5
Beryllium	0.0017	J	0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 21:35	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 21:35	5
Calcium	53		0.25	0.13	mg/L		08/21/17 11:47	08/24/17 21:35	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/21/17 11:47	08/24/17 21:35	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/21/17 11:47	08/24/17 21:35	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/21/17 11:47	08/24/17 21:35	5
Lithium	0.013		0.0050	0.0032	mg/L		08/21/17 11:47	08/24/17 21:35	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/21/17 11:47	08/24/17 21:35	5
Selenium	0.0031		0.0013	0.00024	mg/L		08/21/17 11:47	08/24/17 21:35	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/21/17 11:47	08/24/17 21:35	5

### Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.8		0.050	0.021	mg/L		08/21/17 11:47	08/27/17 19:07	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		08/20/17 12:47	08/22/17 12:38	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	380		5.0	3.4	mg/L			08/16/17 13:32	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-141841-12**

**Date Collected: 08/10/17 10:07**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.3		1.0	0.89	mg/L			08/15/17 18:50	1
Fluoride	1.6		0.20	0.082	mg/L			08/15/17 18:50	1
Sulfate	38		1.0	0.70	mg/L			08/15/17 18:50	1

### 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		08/21/17 11:47	08/24/17 21:39	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/21/17 11:47	08/24/17 21:39	5
Barium	0.00053	J	0.0025	0.00049	mg/L		08/21/17 11:47	08/24/17 21:39	5
Beryllium	0.00034	J	0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 21:39	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 21:39	5
Calcium	7.5		0.25	0.13	mg/L		08/21/17 11:47	08/24/17 21:39	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/21/17 11:47	08/24/17 21:39	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/21/17 11:47	08/24/17 21:39	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/21/17 11:47	08/24/17 21:39	5
Lithium	0.038		0.0050	0.0032	mg/L		08/21/17 11:47	08/24/17 21:39	5
Molybdenum	0.0046	J	0.015	0.00085	mg/L		08/21/17 11:47	08/24/17 21:39	5
Selenium	0.0021		0.0013	0.00024	mg/L		08/21/17 11:47	08/24/17 21:39	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/21/17 11:47	08/24/17 21:39	5

### Method: 6020 - Metals (ICP/MS) - Total Recoverable - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.29		0.050	0.021	mg/L		08/21/17 11:47	08/27/17 19:11	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		08/20/17 12:47	08/22/17 12:40	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	130		5.0	3.4	mg/L			08/16/17 13:32	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: FB-2**  
**Date Collected: 08/09/17 14:23**  
**Date Received: 08/12/17 08:34**

**Lab Sample ID: 400-141841-13**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			08/15/17 19:12	1
Fluoride	<0.082		0.20	0.082	mg/L			08/15/17 19:12	1
Sulfate	<0.70		1.0	0.70	mg/L			08/15/17 19:12	1

### 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		08/21/17 11:47	08/24/17 21:44	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/21/17 11:47	08/24/17 21:44	5
Barium	<0.00049		0.0025	0.00049	mg/L		08/21/17 11:47	08/24/17 21:44	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 21:44	5
<b>Boron</b>	<b>0.035</b>	<b>J</b>	0.050	0.021	mg/L		08/21/17 11:47	08/24/17 21:44	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 21:44	5
Calcium	<0.13		0.25	0.13	mg/L		08/21/17 11:47	08/24/17 21:44	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/21/17 11:47	08/24/17 21:44	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/21/17 11:47	08/24/17 21:44	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/21/17 11:47	08/24/17 21:44	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/21/17 11:47	08/24/17 21:44	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/21/17 11:47	08/24/17 21:44	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/21/17 11:47	08/24/17 21:44	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/21/17 11:47	08/24/17 21:44	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		08/20/17 12:47	08/22/17 12:41	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			08/13/17 09:17	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: FERB-1**

**Date Collected: 08/09/17 11:30**

**Date Received: 08/12/17 08:34**

**Lab Sample ID: 400-141841-14**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			08/15/17 19:35	1
Fluoride	<0.082		0.20	0.082	mg/L			08/15/17 19:35	1
Sulfate	<0.70		1.0	0.70	mg/L			08/15/17 19:35	1

### 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		08/21/17 11:47	08/24/17 21:48	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/21/17 11:47	08/24/17 21:48	5
Barium	<0.00049		0.0025	0.00049	mg/L		08/21/17 11:47	08/24/17 21:48	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 21:48	5
<b>Boron</b>	<b>0.022</b>	<b>J</b>	0.050	0.021	mg/L		08/21/17 11:47	08/24/17 21:48	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 21:48	5
Calcium	<0.13		0.25	0.13	mg/L		08/21/17 11:47	08/24/17 21:48	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/21/17 11:47	08/24/17 21:48	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/21/17 11:47	08/24/17 21:48	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/21/17 11:47	08/24/17 21:48	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/21/17 11:47	08/24/17 21:48	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/21/17 11:47	08/24/17 21:48	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/21/17 11:47	08/24/17 21:48	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/21/17 11:47	08/24/17 21:48	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		08/20/17 12:47	08/22/17 12:43	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			08/13/17 09:17	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-19**

**Date Collected: 08/10/17 11:47**

**Date Received: 08/12/17 08:34**

**Lab Sample ID: 400-141841-15**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.5		1.0	0.89	mg/L			08/15/17 20:44	1
Fluoride	0.42		0.20	0.082	mg/L			08/15/17 20:44	1
Sulfate	3.7		1.0	0.70	mg/L			08/15/17 20:44	1

### 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		08/21/17 11:47	08/24/17 22:11	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/21/17 11:47	08/24/17 22:11	5
Barium	0.0012	J	0.0025	0.00049	mg/L		08/21/17 11:47	08/24/17 22:11	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 22:11	5
Boron	<0.021		0.050	0.021	mg/L		08/21/17 11:47	08/24/17 22:11	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 22:11	5
Calcium	8.8		0.25	0.13	mg/L		08/21/17 11:47	08/24/17 22:11	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/21/17 11:47	08/24/17 22:11	5
Cobalt	0.00049	J	0.0025	0.00040	mg/L		08/21/17 11:47	08/24/17 22:11	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/21/17 11:47	08/24/17 22:11	5
Lithium	0.056		0.0050	0.0032	mg/L		08/21/17 11:47	08/24/17 22:11	5
Molybdenum	0.0016	J	0.015	0.00085	mg/L		08/21/17 11:47	08/24/17 22:11	5
Selenium	0.00036	J	0.0013	0.00024	mg/L		08/21/17 11:47	08/24/17 22:11	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/21/17 11:47	08/24/17 22:11	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		08/20/17 12:47	08/22/17 12:45	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	66		5.0	3.4	mg/L			08/16/17 13:32	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: FERB-2**

**Date Collected: 08/10/17 10:15**

**Date Received: 08/12/17 08:34**

**Lab Sample ID: 400-141841-16**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			08/15/17 21:07	1
Fluoride	<0.082		0.20	0.082	mg/L			08/15/17 21:07	1
Sulfate	<0.70		1.0	0.70	mg/L			08/15/17 21:07	1

### 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		08/21/17 11:47	08/24/17 22:16	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/21/17 11:47	08/24/17 22:16	5
Barium	<0.00049		0.0025	0.00049	mg/L		08/21/17 11:47	08/24/17 22:16	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 22:16	5
Boron	<0.021		0.050	0.021	mg/L		08/21/17 11:47	08/24/17 22:16	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 22:16	5
Calcium	<0.13		0.25	0.13	mg/L		08/21/17 11:47	08/24/17 22:16	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/21/17 11:47	08/24/17 22:16	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/21/17 11:47	08/24/17 22:16	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/21/17 11:47	08/24/17 22:16	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/21/17 11:47	08/24/17 22:16	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/21/17 11:47	08/24/17 22:16	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/21/17 11:47	08/24/17 22:16	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/21/17 11:47	08/24/17 22:16	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		08/20/17 12:47	08/22/17 13:02	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			08/16/17 13:32	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

## Qualifiers

### HPLC/IC

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.

### 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.

## 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 Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: DUP-2**  
**Date Collected: 08/10/17 00:00**  
**Date Received: 08/12/17 08:34**

**Lab Sample ID: 400-141841-1**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364324	08/15/17 12:45	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364980	08/21/17 11:47	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 20:22	DRE	TAL PEN
Total/NA	Prep	7470A			364538	08/20/17 12:47	DN1	TAL PEN
Total/NA	Analysis	7470A		1	365201	08/22/17 12:05	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	364014	08/13/17 09:17	RRC	TAL PEN

**Client Sample ID: WGWC-12**  
**Date Collected: 08/10/17 11:50**  
**Date Received: 08/12/17 08:34**

**Lab Sample ID: 400-141841-2**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364324	08/15/17 13:53	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364980	08/21/17 11:47	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 20:35	DRE	TAL PEN
Total/NA	Prep	7470A			364538	08/20/17 12:47	DN1	TAL PEN
Total/NA	Analysis	7470A		1	365201	08/22/17 12:11	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	364387	08/16/17 13:32	TET	TAL PEN

**Client Sample ID: WGWC-11**  
**Date Collected: 08/10/17 09:45**  
**Date Received: 08/12/17 08:34**

**Lab Sample ID: 400-141841-3**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364324	08/15/17 14:16	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364980	08/21/17 11:47	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 20:40	DRE	TAL PEN
Total/NA	Prep	7470A			364538	08/20/17 12:47	DN1	TAL PEN
Total/NA	Analysis	7470A		1	365201	08/22/17 12:13	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	364387	08/16/17 13:32	TET	TAL PEN

**Client Sample ID: WGWC-10**  
**Date Collected: 08/10/17 14:10**  
**Date Received: 08/12/17 08:34**

**Lab Sample ID: 400-141841-4**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364324	08/15/17 14:39	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364980	08/21/17 11:47	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 20:44	DRE	TAL PEN
Total/NA	Prep	7470A			364538	08/20/17 12:47	DN1	TAL PEN
Total/NA	Analysis	7470A		1	365201	08/22/17 12:15	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	364387	08/16/17 13:32	TET	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-141841-5**

**Date Collected: 08/09/17 14:15**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364324	08/15/17 15:01	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364980	08/21/17 11:47	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 21:07	DRE	TAL PEN
Total/NA	Prep	7470A			364538	08/20/17 12:47	DN1	TAL PEN
Total/NA	Analysis	7470A		1	365201	08/22/17 12:17	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	364014	08/13/17 09:17	RRC	TAL PEN

**Client Sample ID: WGWA-5**

**Lab Sample ID: 400-141841-6**

**Date Collected: 08/09/17 10:15**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364324	08/15/17 16:10	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364980	08/21/17 11:47	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 21:12	DRE	TAL PEN
Total/NA	Prep	7470A			364538	08/20/17 12:47	DN1	TAL PEN
Total/NA	Analysis	7470A		1	365201	08/22/17 12:29	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	364014	08/13/17 09:17	RRC	TAL PEN

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-141841-7**

**Date Collected: 08/09/17 11:25**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364324	08/15/17 16:33	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364980	08/21/17 11:47	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 21:16	DRE	TAL PEN
Total/NA	Prep	7470A			364538	08/20/17 12:47	DN1	TAL PEN
Total/NA	Analysis	7470A		1	365201	08/22/17 12:31	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	364014	08/13/17 09:17	RRC	TAL PEN

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-141841-8**

**Date Collected: 08/09/17 13:15**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364324	08/15/17 16:56	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364980	08/21/17 11:47	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 21:21	DRE	TAL PEN
Total/NA	Prep	7470A			364538	08/20/17 12:47	DN1	TAL PEN
Total/NA	Analysis	7470A		1	365201	08/22/17 12:33	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	364014	08/13/17 09:17	RRC	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-141841-9**

**Date Collected: 08/09/17 14:19**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364324	08/15/17 17:18	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364980	08/21/17 11:47	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 21:25	DRE	TAL PEN
Total/NA	Prep	7470A			364538	08/20/17 12:47	DN1	TAL PEN
Total/NA	Analysis	7470A		1	365201	08/22/17 12:35	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	364014	08/13/17 09:17	RRC	TAL PEN

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-141841-10**

**Date Collected: 08/09/17 11:53**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364324	08/15/17 17:41	TAJ	TAL PEN
Total/NA	Analysis	300.0		20	364486	08/16/17 12:15	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364980	08/21/17 11:47	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 21:30	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		364980	08/21/17 11:47	DN1	TAL PEN
Total Recoverable	Analysis	6020	DL	50	365886	08/27/17 19:16	DRE	TAL PEN
Total/NA	Prep	7470A			364538	08/20/17 12:47	DN1	TAL PEN
Total/NA	Analysis	7470A		1	365201	08/22/17 12:36	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	364014	08/13/17 09:17	RRC	TAL PEN

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-141841-11**

**Date Collected: 08/10/17 12:37**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364324	08/15/17 18:04	TAJ	TAL PEN
Total/NA	Analysis	300.0		5	364486	08/16/17 13:24	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364980	08/21/17 11:47	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 21:35	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		364980	08/21/17 11:47	DN1	TAL PEN
Total Recoverable	Analysis	6020	RA	5	365886	08/27/17 19:07	DRE	TAL PEN
Total/NA	Prep	7470A			364538	08/20/17 12:47	DN1	TAL PEN
Total/NA	Analysis	7470A		1	365201	08/22/17 12:38	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	364387	08/16/17 13:32	TET	TAL PEN



# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-141841-12**

**Date Collected: 08/10/17 10:07**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364324	08/15/17 18:50	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364980	08/21/17 11:47	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 21:39	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		364980	08/21/17 11:47	DN1	TAL PEN
Total Recoverable	Analysis	6020	RA	5	365886	08/27/17 19:11	DRE	TAL PEN
Total/NA	Prep	7470A			364538	08/20/17 12:47	DN1	TAL PEN
Total/NA	Analysis	7470A		1	365201	08/22/17 12:40	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	364387	08/16/17 13:32	TET	TAL PEN

**Client Sample ID: FB-2**

**Lab Sample ID: 400-141841-13**

**Date Collected: 08/09/17 14:23**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364324	08/15/17 19:12	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364980	08/21/17 11:47	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 21:44	DRE	TAL PEN
Total/NA	Prep	7470A			364538	08/20/17 12:47	DN1	TAL PEN
Total/NA	Analysis	7470A		1	365201	08/22/17 12:41	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	364014	08/13/17 09:17	RRC	TAL PEN

**Client Sample ID: FERB-1**

**Lab Sample ID: 400-141841-14**

**Date Collected: 08/09/17 11:30**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364324	08/15/17 19:35	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364980	08/21/17 11:47	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 21:48	DRE	TAL PEN
Total/NA	Prep	7470A			364538	08/20/17 12:47	DN1	TAL PEN
Total/NA	Analysis	7470A		1	365201	08/22/17 12:43	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	364014	08/13/17 09:17	RRC	TAL PEN

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-141841-15**

**Date Collected: 08/10/17 11:47**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364324	08/15/17 20:44	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364980	08/21/17 11:47	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 22:11	DRE	TAL PEN
Total/NA	Prep	7470A			364538	08/20/17 12:47	DN1	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-141841-15**

**Date Collected: 08/10/17 11:47**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7470A		1	365201	08/22/17 12:45	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	364387	08/16/17 13:32	TET	TAL PEN

**Client Sample ID: FERB-2**

**Lab Sample ID: 400-141841-16**

**Date Collected: 08/10/17 10:15**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	364324	08/15/17 21:07	TAJ	TAL PEN
Total Recoverable	Prep	3005A			364980	08/21/17 11:47	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	365637	08/24/17 22:16	DRE	TAL PEN
Total/NA	Prep	7470A			364538	08/20/17 12:47	DN1	TAL PEN
Total/NA	Analysis	7470A		1	365201	08/22/17 13:02	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	364387	08/16/17 13:32	TET	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 Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

## HPLC/IC

### Analysis Batch: 364324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141841-1	DUP-2	Total/NA	Water	300.0	
400-141841-2	WGWC-12	Total/NA	Water	300.0	
400-141841-3	WGWC-11	Total/NA	Water	300.0	
400-141841-4	WGWC-10	Total/NA	Water	300.0	
400-141841-5	WGWC-13	Total/NA	Water	300.0	
400-141841-6	WGWA-5	Total/NA	Water	300.0	
400-141841-7	WGWA-4	Total/NA	Water	300.0	
400-141841-8	WGWC-17	Total/NA	Water	300.0	
400-141841-9	WGWC-15	Total/NA	Water	300.0	
400-141841-10	WGWC-16	Total/NA	Water	300.0	
400-141841-11	WGWC-8	Total/NA	Water	300.0	
400-141841-12	WGWC-9	Total/NA	Water	300.0	
400-141841-13	FB-2	Total/NA	Water	300.0	
400-141841-14	FERB-1	Total/NA	Water	300.0	
400-141841-15	WGWC-19	Total/NA	Water	300.0	
400-141841-16	FERB-2	Total/NA	Water	300.0	
MB 400-364324/4	Method Blank	Total/NA	Water	300.0	
LCS 400-364324/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-364324/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-141841-1 MS	DUP-2	Total/NA	Water	300.0	
400-141841-1 MSD	DUP-2	Total/NA	Water	300.0	

### Analysis Batch: 364486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141841-10	WGWC-16	Total/NA	Water	300.0	
400-141841-11	WGWC-8	Total/NA	Water	300.0	
MB 400-364486/4	Method Blank	Total/NA	Water	300.0	
LCS 400-364486/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-364486/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-141841-10 MS	WGWC-16	Total/NA	Water	300.0	
400-141841-10 MSD	WGWC-16	Total/NA	Water	300.0	

## Metals

### Prep Batch: 364538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141841-1	DUP-2	Total/NA	Water	7470A	
400-141841-2	WGWC-12	Total/NA	Water	7470A	
400-141841-3	WGWC-11	Total/NA	Water	7470A	
400-141841-4	WGWC-10	Total/NA	Water	7470A	
400-141841-5	WGWC-13	Total/NA	Water	7470A	
400-141841-6	WGWA-5	Total/NA	Water	7470A	
400-141841-7	WGWA-4	Total/NA	Water	7470A	
400-141841-8	WGWC-17	Total/NA	Water	7470A	
400-141841-9	WGWC-15	Total/NA	Water	7470A	
400-141841-10	WGWC-16	Total/NA	Water	7470A	
400-141841-11	WGWC-8	Total/NA	Water	7470A	
400-141841-12	WGWC-9	Total/NA	Water	7470A	
400-141841-13	FB-2	Total/NA	Water	7470A	
400-141841-14	FERB-1	Total/NA	Water	7470A	

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

## Metals (Continued)

### Prep Batch: 364538 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141841-15	WGWC-19	Total/NA	Water	7470A	
400-141841-16	FERB-2	Total/NA	Water	7470A	
MB 400-364538/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-364538/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-141841-1 MS	DUP-2	Total/NA	Water	7470A	
400-141841-1 MSD	DUP-2	Total/NA	Water	7470A	

### Prep Batch: 364980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141841-1	DUP-2	Total Recoverable	Water	3005A	
400-141841-2	WGWC-12	Total Recoverable	Water	3005A	
400-141841-3	WGWC-11	Total Recoverable	Water	3005A	
400-141841-4	WGWC-10	Total Recoverable	Water	3005A	
400-141841-5	WGWC-13	Total Recoverable	Water	3005A	
400-141841-6	WGWA-5	Total Recoverable	Water	3005A	
400-141841-7	WGWA-4	Total Recoverable	Water	3005A	
400-141841-8	WGWC-17	Total Recoverable	Water	3005A	
400-141841-9	WGWC-15	Total Recoverable	Water	3005A	
400-141841-10	WGWC-16	Total Recoverable	Water	3005A	
400-141841-10 - DL	WGWC-16	Total Recoverable	Water	3005A	
400-141841-11	WGWC-8	Total Recoverable	Water	3005A	
400-141841-11 - RA	WGWC-8	Total Recoverable	Water	3005A	
400-141841-12	WGWC-9	Total Recoverable	Water	3005A	
400-141841-12 - RA	WGWC-9	Total Recoverable	Water	3005A	
400-141841-13	FB-2	Total Recoverable	Water	3005A	
400-141841-14	FERB-1	Total Recoverable	Water	3005A	
400-141841-15	WGWC-19	Total Recoverable	Water	3005A	
400-141841-16	FERB-2	Total Recoverable	Water	3005A	
MB 400-364980/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-364980/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
660-82387-G-1-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
660-82387-G-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Analysis Batch: 365201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141841-1	DUP-2	Total/NA	Water	7470A	364538
400-141841-2	WGWC-12	Total/NA	Water	7470A	364538
400-141841-3	WGWC-11	Total/NA	Water	7470A	364538
400-141841-4	WGWC-10	Total/NA	Water	7470A	364538
400-141841-5	WGWC-13	Total/NA	Water	7470A	364538
400-141841-6	WGWA-5	Total/NA	Water	7470A	364538
400-141841-7	WGWA-4	Total/NA	Water	7470A	364538
400-141841-8	WGWC-17	Total/NA	Water	7470A	364538
400-141841-9	WGWC-15	Total/NA	Water	7470A	364538
400-141841-10	WGWC-16	Total/NA	Water	7470A	364538
400-141841-11	WGWC-8	Total/NA	Water	7470A	364538
400-141841-12	WGWC-9	Total/NA	Water	7470A	364538
400-141841-13	FB-2	Total/NA	Water	7470A	364538
400-141841-14	FERB-1	Total/NA	Water	7470A	364538
400-141841-15	WGWC-19	Total/NA	Water	7470A	364538
400-141841-16	FERB-2	Total/NA	Water	7470A	364538

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

## Metals (Continued)

### Analysis Batch: 365201 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-364538/14-A	Method Blank	Total/NA	Water	7470A	364538
LCS 400-364538/15-A	Lab Control Sample	Total/NA	Water	7470A	364538
400-141841-1 MS	DUP-2	Total/NA	Water	7470A	364538
400-141841-1 MSD	DUP-2	Total/NA	Water	7470A	364538

### Analysis Batch: 365637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141841-1	DUP-2	Total Recoverable	Water	6020	364980
400-141841-2	WGWC-12	Total Recoverable	Water	6020	364980
400-141841-3	WGWC-11	Total Recoverable	Water	6020	364980
400-141841-4	WGWC-10	Total Recoverable	Water	6020	364980
400-141841-5	WGWC-13	Total Recoverable	Water	6020	364980
400-141841-6	WGWA-5	Total Recoverable	Water	6020	364980
400-141841-7	WGWA-4	Total Recoverable	Water	6020	364980
400-141841-8	WGWC-17	Total Recoverable	Water	6020	364980
400-141841-9	WGWC-15	Total Recoverable	Water	6020	364980
400-141841-10	WGWC-16	Total Recoverable	Water	6020	364980
400-141841-11	WGWC-8	Total Recoverable	Water	6020	364980
400-141841-12	WGWC-9	Total Recoverable	Water	6020	364980
400-141841-13	FB-2	Total Recoverable	Water	6020	364980
400-141841-14	FERB-1	Total Recoverable	Water	6020	364980
400-141841-15	WGWC-19	Total Recoverable	Water	6020	364980
400-141841-16	FERB-2	Total Recoverable	Water	6020	364980
MB 400-364980/1-A ^5	Method Blank	Total Recoverable	Water	6020	364980
LCS 400-364980/2-A	Lab Control Sample	Total Recoverable	Water	6020	364980
660-82387-G-1-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	364980
660-82387-G-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	364980

### Analysis Batch: 365886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141841-10 - DL	WGWC-16	Total Recoverable	Water	6020	364980
400-141841-11 - RA	WGWC-8	Total Recoverable	Water	6020	364980
400-141841-12 - RA	WGWC-9	Total Recoverable	Water	6020	364980

## General Chemistry

### Analysis Batch: 364014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141841-1	DUP-2	Total/NA	Water	SM 2540C	
400-141841-5	WGWC-13	Total/NA	Water	SM 2540C	
400-141841-6	WGWA-5	Total/NA	Water	SM 2540C	
400-141841-7	WGWA-4	Total/NA	Water	SM 2540C	
400-141841-8	WGWC-17	Total/NA	Water	SM 2540C	
400-141841-9	WGWC-15	Total/NA	Water	SM 2540C	
400-141841-10	WGWC-16	Total/NA	Water	SM 2540C	
400-141841-13	FB-2	Total/NA	Water	SM 2540C	
400-141841-14	FERB-1	Total/NA	Water	SM 2540C	
MB 400-364014/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-364014/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-141841-6 DU	WGWA-5	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

## General Chemistry (Continued)

### Analysis Batch: 364387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141841-2	WGWC-12	Total/NA	Water	SM 2540C	
400-141841-3	WGWC-11	Total/NA	Water	SM 2540C	
400-141841-4	WGWC-10	Total/NA	Water	SM 2540C	
400-141841-11	WGWC-8	Total/NA	Water	SM 2540C	
400-141841-12	WGWC-9	Total/NA	Water	SM 2540C	
400-141841-15	WGWC-19	Total/NA	Water	SM 2540C	
400-141841-16	FERB-2	Total/NA	Water	SM 2540C	
MB 400-364387/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-364387/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-141841-12 DU	WGWC-9	Total/NA	Water	SM 2540C	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 400-364324/4**  
**Matrix: Water**  
**Analysis Batch: 364324**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			08/15/17 11:29	1
Fluoride	<0.082		0.20	0.082	mg/L			08/15/17 11:29	1
Sulfate	<0.70		1.0	0.70	mg/L			08/15/17 11:29	1

**Lab Sample ID: LCS 400-364324/5**  
**Matrix: Water**  
**Analysis Batch: 364324**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.56		mg/L		96	90 - 110
Fluoride	10.0	10.1		mg/L		101	90 - 110
Sulfate	10.0	10.1		mg/L		101	90 - 110

**Lab Sample ID: LCSD 400-364324/6**  
**Matrix: Water**  
**Analysis Batch: 364324**

**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	10.0	9.56		mg/L		96	90 - 110	0	15
Fluoride	10.0	10.0		mg/L		100	90 - 110	1	15
Sulfate	10.0	10.1		mg/L		101	90 - 110	0	15

**Lab Sample ID: 400-141841-1 MS**  
**Matrix: Water**  
**Analysis Batch: 364324**

**Client Sample ID: DUP-2**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	3.1		10.0	12.9		mg/L		98	80 - 120
Fluoride	<0.082		10.0	10.4		mg/L		104	80 - 120
Sulfate	2.3		10.0	12.7		mg/L		104	80 - 120

**Lab Sample ID: 400-141841-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 364324**

**Client Sample ID: DUP-2**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	3.1		10.0	12.9		mg/L		98	80 - 120	0	20
Fluoride	<0.082		10.0	10.3		mg/L		103	80 - 120	1	20
Sulfate	2.3		10.0	12.8		mg/L		105	80 - 120	1	20

**Lab Sample ID: MB 400-364486/4**  
**Matrix: Water**  
**Analysis Batch: 364486**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			08/16/17 11:07	1
Fluoride	<0.082		0.20	0.082	mg/L			08/16/17 11:07	1
Sulfate	<0.70		1.0	0.70	mg/L			08/16/17 11:07	1

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 400-364486/5**  
**Matrix: Water**  
**Analysis Batch: 364486**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.65		mg/L		96	90 - 110
Fluoride	10.0	10.3		mg/L		103	90 - 110
Sulfate	10.0	10.2		mg/L		102	90 - 110

**Lab Sample ID: LCSD 400-364486/6**  
**Matrix: Water**  
**Analysis Batch: 364486**

**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	10.0	9.58		mg/L		96	90 - 110	1	15
Fluoride	10.0	10.1		mg/L		101	90 - 110	2	15
Sulfate	10.0	10.1		mg/L		101	90 - 110	1	15

**Lab Sample ID: 400-141841-10 MS**  
**Matrix: Water**  
**Analysis Batch: 364486**

**Client Sample ID: WGWC-16**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	330		200	523		mg/L		97	80 - 120
Fluoride	<1.6		200	216		mg/L		108	80 - 120
Sulfate	780		200	976		mg/L		99	80 - 120

**Lab Sample ID: 400-141841-10 MSD**  
**Matrix: Water**  
**Analysis Batch: 364486**

**Client Sample ID: WGWC-16**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	330		200	524		mg/L		98	80 - 120	0	20
Fluoride	<1.6		200	213		mg/L		107	80 - 120	1	20
Sulfate	780		200	981		mg/L		101	80 - 120	1	20

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 400-364980/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 365637**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 364980**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/21/17 11:47	08/24/17 20:08	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/21/17 11:47	08/24/17 20:08	5
Barium	<0.00049		0.0025	0.00049	mg/L		08/21/17 11:47	08/24/17 20:08	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 20:08	5
Boron	<0.021		0.050	0.021	mg/L		08/21/17 11:47	08/24/17 20:08	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/21/17 11:47	08/24/17 20:08	5
Calcium	<0.13		0.25	0.13	mg/L		08/21/17 11:47	08/24/17 20:08	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/21/17 11:47	08/24/17 20:08	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/21/17 11:47	08/24/17 20:08	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/21/17 11:47	08/24/17 20:08	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/21/17 11:47	08/24/17 20:08	5

TestAmerica Pensacola



# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 400-364980/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 365637**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 364980**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/21/17 11:47	08/24/17 20:08	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/21/17 11:47	08/24/17 20:08	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/21/17 11:47	08/24/17 20:08	5

**Lab Sample ID: LCS 400-364980/2-A**  
**Matrix: Water**  
**Analysis Batch: 365637**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 364980**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0530		mg/L		106	80 - 120
Arsenic	0.0500	0.0529		mg/L		106	80 - 120
Barium	0.0500	0.0507		mg/L		101	80 - 120
Beryllium	0.0500	0.0503		mg/L		101	80 - 120
Boron	0.100	0.0988		mg/L		99	80 - 120
Cadmium	0.0500	0.0528		mg/L		106	80 - 120
Calcium	5.00	4.95		mg/L		99	80 - 120
Chromium	0.0500	0.0525		mg/L		105	80 - 120
Cobalt	0.0500	0.0535		mg/L		107	80 - 120
Lead	0.0500	0.0510		mg/L		102	80 - 120
Lithium	0.0500	0.0532		mg/L		106	80 - 120
Molybdenum	0.100	0.104		mg/L		104	80 - 120
Selenium	0.0500	0.0517		mg/L		103	80 - 120
Thallium	0.0100	0.0102		mg/L		102	80 - 120

**Lab Sample ID: 660-82387-G-1-B MS ^5**  
**Matrix: Water**  
**Analysis Batch: 365637**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 364980**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0534		mg/L		107	75 - 125
Arsenic	0.0014		0.0500	0.0540		mg/L		105	75 - 125
Barium	0.018		0.0500	0.0683		mg/L		100	75 - 125
Beryllium	<0.00034		0.0500	0.0511		mg/L		102	75 - 125
Boron	0.14		0.100	0.234		mg/L		97	75 - 125
Cadmium	<0.00034		0.0500	0.0515		mg/L		103	75 - 125
Calcium	52		5.00	56.9	4	mg/L		97	75 - 125
Chromium	0.0014	J	0.0500	0.0535		mg/L		104	75 - 125
Cobalt	0.00056	J	0.0500	0.0521		mg/L		103	75 - 125
Lead	<0.00035		0.0500	0.0507		mg/L		101	75 - 125
Lithium	<0.0032		0.0500	0.0513		mg/L		103	75 - 125
Molybdenum	<0.00085		0.100	0.101		mg/L		101	75 - 125
Selenium	0.00041	J	0.0500	0.0500		mg/L		99	75 - 125
Thallium	<0.000085		0.0100	0.0102		mg/L		102	75 - 125

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 660-82387-G-1-C MSD ^5**

**Matrix: Water**  
**Analysis Batch: 365637**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total Recoverable**  
**Prep Batch: 364980**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0540		mg/L		108	75 - 125	1	20
Arsenic	0.0014		0.0500	0.0546		mg/L		107	75 - 125	1	20
Barium	0.018		0.0500	0.0685		mg/L		101	75 - 125	0	20
Beryllium	<0.00034		0.0500	0.0513		mg/L		103	75 - 125	0	20
Boron	0.14		0.100	0.241		mg/L		105	75 - 125	3	20
Cadmium	<0.00034		0.0500	0.0506		mg/L		101	75 - 125	2	20
Calcium	52		5.00	57.8	4	mg/L		114	75 - 125	1	20
Chromium	0.0014	J	0.0500	0.0537		mg/L		105	75 - 125	0	20
Cobalt	0.00056	J	0.0500	0.0522		mg/L		103	75 - 125	0	20
Lead	<0.00035		0.0500	0.0509		mg/L		102	75 - 125	0	20
Lithium	<0.0032		0.0500	0.0546		mg/L		109	75 - 125	6	20
Molybdenum	<0.00085		0.100	0.102		mg/L		102	75 - 125	1	20
Selenium	0.00041	J	0.0500	0.0522		mg/L		104	75 - 125	4	20
Thallium	<0.000085		0.0100	0.0102		mg/L		102	75 - 125	0	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 400-364538/14-A**

**Matrix: Water**  
**Analysis Batch: 365201**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**  
**Prep Batch: 364538**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/20/17 12:47	08/22/17 12:01	1

**Lab Sample ID: LCS 400-364538/15-A**

**Matrix: Water**  
**Analysis Batch: 365201**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**  
**Prep Batch: 364538**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00103		mg/L		102	80 - 120

**Lab Sample ID: 400-141841-1 MS**

**Matrix: Water**  
**Analysis Batch: 365201**

**Client Sample ID: DUP-2**

**Prep Type: Total/NA**  
**Prep Batch: 364538**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00210		mg/L		104	80 - 120

**Lab Sample ID: 400-141841-1 MSD**

**Matrix: Water**  
**Analysis Batch: 365201**

**Client Sample ID: DUP-2**

**Prep Type: Total/NA**  
**Prep Batch: 364538**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00206		mg/L		102	80 - 120	2	20

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
SDG: Plant Wansley Ash Pond

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 400-364014/1**  
**Matrix: Water**  
**Analysis Batch: 364014**

**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			08/13/17 09:17	1

**Lab Sample ID: LCS 400-364014/2**  
**Matrix: Water**  
**Analysis Batch: 364014**

**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: 400-141841-6 DU**  
**Matrix: Water**  
**Analysis Batch: 364014**

**Client Sample ID: WGWA-5**  
**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 400-364387/1**  
**Matrix: Water**  
**Analysis Batch: 364387**

**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			08/16/17 13:32	1

**Lab Sample ID: LCS 400-364387/2**  
**Matrix: Water**  
**Analysis Batch: 364387**

**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: 400-141841-12 DU**  
**Matrix: Water**  
**Analysis Batch: 364387**

**Client Sample ID: WGWC-9**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	130		126		mg/L		0	5



**TestAmerica Pensacola** 681-Atlanta  
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### Chain of Custody Record

**Client Information**  
 Sampler: C. Hurdle of, T. Payne TP, A. Ellis AVE  
 Lab PM: Whitmore, Cheyenne R  
 Client Contact: Joju Abraham  
 Phone: Cheyenne.whitmore@testamericainc.com  
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**Southern Company**  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
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 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)	Preservation Code	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470		TDS - SM 2540C : Cl <sub>2</sub> F <sub>2</sub> SO <sub>4</sub> - EPA 300	Radium 226 & 228 - SW-846 9315 & 9320	Total Number of containers	Special Instructions/Note:
						Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	D	I	D	D				
WP-2	08.10.2107	--	G	W											
WGWC-12	08.10.2107	1150	G	W											
WGWC-11	08.10.2107	0945	G	W											
WGWC-10	08.10.2107	1410	G	W											
FERB-1	08.09.2017	1130	G	W											
WGWC-13	08.09.2017	1415	G	W											
WGWA-5	08.09.2017	1015	G	W											
WGWA-4	08.09.2017	1125	G	W											
WGWC-17	08.09.2017	1315	G	W											
WGWC-15	08.09.2017	1419	G	W											
WGWC-16	08.09.2017	1153	G	W											

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  Dispose By Lab  Archive For \_\_\_\_\_ Months

**Special Instructions/QC Requirements:**

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Method of Shipment: \_\_\_\_\_

Relinquished by: *Anthony & Lili* Date/Time: 08/14/2017 1500 Company: \_\_\_\_\_  
 Relinquished by: *AT* Date/Time: 8/14/17 1630 Company: \_\_\_\_\_  
 Relinquished by: *AT* Date/Time: 8/12/17 834 Company: \_\_\_\_\_

Cooler Temperature(s) °C and Other Remarks: 0.0°C, 3.5°C IR7



## Chain of Custody Record

**Client Information**  
 Client Contact: Whitmire, Chyanne R  
 Joliz Abraham  
 Company: Southern Company  
 Address: 2411 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

**Lab P/M:** Whitmire, Chyanne R  
**E-Mail:** chyanne.whitmire@testamericainc.com

**Carrier Tracking No(s):**  
**Job #:**

Sample ID	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, On-waste, Soil, BT-tissue, Air)	Preservation Code	Analysis Requested		Special Instructions/Note
						Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	
WC-8	08.10.2017	1237	G	W		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
WC-9	08.10.2017	1007	G	W		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
WC-19	08.10.2017	1147	G	W		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
FERB-2	08.10.2017	1015	G	W		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
FB-2	08.09.2017	1423	G	W		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological

**Deliverable Requested:** I, II, III, IV, Other (specify)

**Empty Kit Relinquished by:** Date: \_\_\_\_\_ Time: \_\_\_\_\_

**Relinquished by:** *Shirley Ellis* Date: 08/17/2017 Time: 1500 Company: TA

**Relinquished by:** *RJE* Date: 8/11/17 Time: 1630 Company: TA

**Relinquished by:** *RJE* Date: 8/11/17 Time: 1505 Company: TA

**Relinquished by:** *RJE* Date: 8/12/17 Time: 834 Company: TA

**Custody Seal No.:**  Yes  No

**Cooler Temperature(s) °C and Other Remarks:**



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-141841-1  
SDG Number: Plant Wansley Ash Pond

**Login Number: 141841**

**List Number: 1**

**Creator: Hughes, Nicholas T**

**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	0.0°C, 3.5°C - IR7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Accreditation/Certification Summary

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-1  
 SDG: Plant Wansley Ash Pond

## Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-18
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	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17 *
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.



# 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: 400-141841-2

TestAmerica Sample Delivery Group: Plant Wansley Ash Pond

Client Project/Site: CCR - Plant Wansley

Sampling Event: Ash Pond

For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Joju Abraham



Authorized for release by:

9/12/2017 5:26:50 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

Review your project  
results through

**TotalAccess**

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Method Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

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 Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-141841-1	DUP-2	Water	08/10/17 00:00	08/12/17 08:34
400-141841-2	WGWC-12	Water	08/10/17 11:50	08/12/17 08:34
400-141841-3	WGWC-11	Water	08/10/17 09:45	08/12/17 08:34
400-141841-4	WGWC-10	Water	08/10/17 14:10	08/12/17 08:34
400-141841-5	WGWC-13	Water	08/09/17 14:15	08/12/17 08:34
400-141841-6	WGWA-5	Water	08/09/17 10:15	08/12/17 08:34
400-141841-7	WGWA-4	Water	08/09/17 11:25	08/12/17 08:34
400-141841-8	WGWC-17	Water	08/09/17 13:15	08/12/17 08:34
400-141841-9	WGWC-15	Water	08/09/17 14:19	08/12/17 08:34
400-141841-10	WGWC-16	Water	08/09/17 11:53	08/12/17 08:34
400-141841-11	WGWC-8	Water	08/10/17 12:37	08/12/17 08:34
400-141841-12	WGWC-9	Water	08/10/17 10:07	08/12/17 08:34
400-141841-13	FB-2	Water	08/09/17 14:23	08/12/17 08:34
400-141841-14	FERB-1	Water	08/09/17 11:30	08/12/17 08:34
400-141841-15	WGWC-19	Water	08/10/17 11:47	08/12/17 08:34
400-141841-16	FERB-2	Water	08/10/17 10:15	08/12/17 08:34

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: DUP-2**

**Date Collected: 08/10/17 00:00**

**Date Received: 08/12/17 08:34**

**Lab Sample ID: 400-141841-1**

**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	0.0477	U	0.0539	0.0541	1.00	0.0868	pCi/L	08/16/17 07:55	09/07/17 05:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					08/16/17 07:55	09/07/17 05:59	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.244	U	0.241	0.242	1.00	0.392	pCi/L	08/16/17 08:20	08/24/17 10:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					08/16/17 08:20	08/24/17 10:14	1
Y Carrier	82.6		40 - 110					08/16/17 08:20	08/24/17 10:14	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.291	U	0.247	0.248	5.00	0.392	pCi/L		09/12/17 10:25	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-141841-2**

**Date Collected: 08/10/17 11:50**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0802	U	0.0630	0.0634	1.00	0.0907	pCi/L	08/16/17 07:55	09/07/17 06:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					08/16/17 07:55	09/07/17 06:00	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.832		0.289	0.299	1.00	0.393	pCi/L	08/16/17 08:20	08/24/17 10:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					08/16/17 08:20	08/24/17 10:14	1
Y Carrier	82.6		40 - 110					08/16/17 08:20	08/24/17 10:14	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.912		0.296	0.306	5.00	0.393	pCi/L		09/12/17 10:25	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-141841-3**

**Date Collected: 08/10/17 09:45**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0364	U	0.0462	0.0463	1.00	0.0762	pCi/L	08/16/17 07:55	09/07/17 06:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					08/16/17 07:55	09/07/17 06:00	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.290	U	0.249	0.251	1.00	0.398	pCi/L	08/16/17 08:20	08/24/17 10:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					08/16/17 08:20	08/24/17 10:14	1
Y Carrier	81.5		40 - 110					08/16/17 08:20	08/24/17 10:14	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.326	U	0.254	0.255	5.00	0.398	pCi/L		09/12/17 10:25	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-141841-4**

**Date Collected: 08/10/17 14:10**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

### Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0584	U	0.0564	0.0567	1.00	0.0866	pCi/L	08/16/17 07:55	09/07/17 06:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					08/16/17 07:55	09/07/17 06:00	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.131	U	0.254	0.254	1.00	0.433	pCi/L	08/16/17 08:20	08/24/17 10:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					08/16/17 08:20	08/24/17 10:14	1
Y Carrier	77.8		40 - 110					08/16/17 08:20	08/24/17 10:14	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.189	U	0.260	0.260	5.00	0.433	pCi/L		09/12/17 10:25	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-141841-5**

Date Collected: 08/09/17 14:15

Matrix: Water

Date Received: 08/12/17 08:34

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.248		0.0853	0.0881	1.00	0.0714	pCi/L	08/16/17 07:55	09/07/17 06:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					08/16/17 07:55	09/07/17 06:00	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.568		0.304	0.308	1.00	0.460	pCi/L	08/16/17 08:20	08/24/17 10:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					08/16/17 08:20	08/24/17 10:15	1
Y Carrier	80.0		40 - 110					08/16/17 08:20	08/24/17 10:15	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.816		0.315	0.321	5.00	0.460	pCi/L		09/12/17 10:25	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-5**

**Lab Sample ID: 400-141841-6**

**Date Collected: 08/09/17 10:15**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

### Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0965		0.0618	0.0624	1.00	0.0790	pCi/L	08/16/17 07:55	09/07/17 06:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					08/16/17 07:55	09/07/17 06:00	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.289	U	0.267	0.268	1.00	0.431	pCi/L	08/16/17 08:20	08/24/17 10:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					08/16/17 08:20	08/24/17 10:15	1
Y Carrier	84.5		40 - 110					08/16/17 08:20	08/24/17 10:15	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.385	U	0.274	0.275	5.00	0.431	pCi/L		09/12/17 10:25	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-141841-7**

Date Collected: 08/09/17 11:25

Matrix: Water

Date Received: 08/12/17 08:34

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.549		0.124	0.133	1.00	0.0911	pCi/L	08/16/17 07:55	09/07/17 06:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					08/16/17 07:55	09/07/17 06:00	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.765		0.299	0.307	1.00	0.420	pCi/L	08/16/17 08:20	08/24/17 10:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					08/16/17 08:20	08/24/17 10:15	1
Y Carrier	83.4		40 - 110					08/16/17 08:20	08/24/17 10:15	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.31		0.323	0.335	5.00	0.420	pCi/L		09/12/17 10:25	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-141841-8**

**Date Collected: 08/09/17 13:15**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00767	U	0.0427	0.0427	1.00	0.0843	pCi/L	08/16/17 07:55	09/07/17 06:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					08/16/17 07:55	09/07/17 06:01	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0323	U	0.221	0.221	1.00	0.398	pCi/L	08/16/17 08:20	08/24/17 10:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.7		40 - 110					08/16/17 08:20	08/24/17 10:15	1
Y Carrier	83.7		40 - 110					08/16/17 08:20	08/24/17 10:15	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0246	U	0.225	0.225	5.00	0.398	pCi/L		09/12/17 10:25	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-141841-9**

**Date Collected: 08/09/17 14:19**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.152		0.0815	0.0827	1.00	0.104	pCi/L	08/16/17 07:55	09/07/17 06:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					08/16/17 07:55	09/07/17 06:01	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.55		0.351	0.379	1.00	0.402	pCi/L	08/16/17 08:20	08/24/17 10:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					08/16/17 08:20	08/24/17 10:16	1
Y Carrier	77.0		40 - 110					08/16/17 08:20	08/24/17 10:16	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.70		0.360	0.387	5.00	0.402	pCi/L		09/12/17 10:25	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-141841-10**

Date Collected: 08/09/17 11:53

Matrix: Water

Date Received: 08/12/17 08:34

### Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.840		0.150	0.168	1.00	0.0729	pCi/L	08/16/17 07:55	09/07/17 06:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					08/16/17 07:55	09/07/17 06:01	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.66		0.335	0.369	1.00	0.370	pCi/L	08/16/17 08:20	08/24/17 10:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					08/16/17 08:20	08/24/17 10:16	1
Y Carrier	84.5		40 - 110					08/16/17 08:20	08/24/17 10:16	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.50		0.367	0.405	5.00	0.370	pCi/L		09/12/17 10:25	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-8**  
**Date Collected: 08/10/17 12:37**  
**Date Received: 08/12/17 08:34**

**Lab Sample ID: 400-141841-11**  
**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	0.451		0.117	0.124	1.00	0.0893	pCi/L	08/16/17 07:55	09/07/17 06:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					08/16/17 07:55	09/07/17 06:01	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.42		0.327	0.352	1.00	0.385	pCi/L	08/16/17 08:20	08/24/17 10:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					08/16/17 08:20	08/24/17 10:16	1
Y Carrier	84.5		40 - 110					08/16/17 08:20	08/24/17 10:16	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.88		0.347	0.373	5.00	0.385	pCi/L		09/12/17 10:25	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-141841-12**

**Date Collected: 08/10/17 10:07**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0914		0.0560	0.0566	1.00	0.0660	pCi/L	08/16/17 07:55	09/07/17 06:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					08/16/17 07:55	09/07/17 06:04	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.288	U	0.224	0.226	1.00	0.354	pCi/L	08/16/17 08:20	08/24/17 10:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					08/16/17 08:20	08/24/17 10:16	1
Y Carrier	87.1		40 - 110					08/16/17 08:20	08/24/17 10:16	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.379		0.231	0.233	5.00	0.354	pCi/L		09/12/17 10:25	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: FB-2**  
**Date Collected: 08/09/17 14:23**  
**Date Received: 08/12/17 08:34**

**Lab Sample ID: 400-141841-13**  
**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		0.0502	0.0506	1.00	0.0634	pCi/L	08/16/17 07:55	09/07/17 06:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					08/16/17 07:55	09/07/17 06:04	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.294	U	0.224	0.226	1.00	0.353	pCi/L	08/16/17 08:20	08/24/17 10:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					08/16/17 08:20	08/24/17 10:16	1
Y Carrier	84.1		40 - 110					08/16/17 08:20	08/24/17 10:16	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.366		0.230	0.232	5.00	0.353	pCi/L		09/12/17 10:25	1



# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: FERB-1**

**Lab Sample ID: 400-141841-14**

**Date Collected: 08/09/17 11:30**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0373	U	0.0394	0.0396	1.00	0.0601	pCi/L	08/16/17 07:55	09/07/17 06:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					08/16/17 07:55	09/07/17 06:04	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.155	U	0.209	0.209	1.00	0.348	pCi/L	08/16/17 08:20	08/24/17 10:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					08/16/17 08:20	08/24/17 10:17	1
Y Carrier	85.6		40 - 110					08/16/17 08:20	08/24/17 10:17	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.192	U	0.213	0.213	5.00	0.348	pCi/L		09/12/17 10:25	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-141841-15**

Date Collected: 08/10/17 11:47

Matrix: Water

Date Received: 08/12/17 08:34

### Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0990		0.0601	0.0607	1.00	0.0727	pCi/L	08/16/17 07:55	09/07/17 06:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					08/16/17 07:55	09/07/17 06:04	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.783		0.317	0.325	1.00	0.448	pCi/L	08/16/17 08:20	08/24/17 10:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					08/16/17 08:20	08/24/17 10:17	1
Y Carrier	72.1		40 - 110					08/16/17 08:20	08/24/17 10:17	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.882		0.323	0.331	5.00	0.448	pCi/L		09/12/17 10:25	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: FERB-2**

**Lab Sample ID: 400-141841-16**

**Date Collected: 08/10/17 10:15**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0386	U	0.0388	0.0390	1.00	0.0575	pCi/L	08/16/17 07:55	09/07/17 06:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					08/16/17 07:55	09/07/17 06:04	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.117	U	0.196	0.197	1.00	0.332	pCi/L	08/16/17 08:20	08/24/17 10:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					08/16/17 08:20	08/24/17 10:17	1
Y Carrier	87.1		40 - 110					08/16/17 08:20	08/24/17 10:17	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.155	U	0.200	0.200	5.00	0.332	pCi/L		09/12/17 10:25	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

## Qualifiers

### Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: DUP-2**  
**Date Collected: 08/10/17 00:00**  
**Date Received: 08/12/17 08:34**

**Lab Sample ID: 400-141841-1**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322346	08/16/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	326167	09/07/17 05:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			322353	08/16/17 08:20	LDE	TAL SL
Total/NA	Analysis	9320		1	324022	08/24/17 10:14	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326912	09/12/17 10:25	RTM	TAL SL

**Client Sample ID: WGWC-12**  
**Date Collected: 08/10/17 11:50**  
**Date Received: 08/12/17 08:34**

**Lab Sample ID: 400-141841-2**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322346	08/16/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	326167	09/07/17 06:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			322353	08/16/17 08:20	LDE	TAL SL
Total/NA	Analysis	9320		1	324022	08/24/17 10:14	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326912	09/12/17 10:25	RTM	TAL SL

**Client Sample ID: WGWC-11**  
**Date Collected: 08/10/17 09:45**  
**Date Received: 08/12/17 08:34**

**Lab Sample ID: 400-141841-3**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322346	08/16/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	326167	09/07/17 06:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			322353	08/16/17 08:20	LDE	TAL SL
Total/NA	Analysis	9320		1	324022	08/24/17 10:14	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326912	09/12/17 10:25	RTM	TAL SL

**Client Sample ID: WGWC-10**  
**Date Collected: 08/10/17 14:10**  
**Date Received: 08/12/17 08:34**

**Lab Sample ID: 400-141841-4**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322346	08/16/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	326167	09/07/17 06:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			322353	08/16/17 08:20	LDE	TAL SL
Total/NA	Analysis	9320		1	324022	08/24/17 10:14	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326912	09/12/17 10:25	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-141841-5**

**Date Collected: 08/09/17 14:15**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322346	08/16/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	326167	09/07/17 06:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			322353	08/16/17 08:20	LDE	TAL SL
Total/NA	Analysis	9320		1	324022	08/24/17 10:15	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326912	09/12/17 10:25	RTM	TAL SL

**Client Sample ID: WGWA-5**

**Lab Sample ID: 400-141841-6**

**Date Collected: 08/09/17 10:15**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322346	08/16/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	326167	09/07/17 06:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			322353	08/16/17 08:20	LDE	TAL SL
Total/NA	Analysis	9320		1	324022	08/24/17 10:15	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326912	09/12/17 10:25	RTM	TAL SL

**Client Sample ID: WGWA-4**

**Lab Sample ID: 400-141841-7**

**Date Collected: 08/09/17 11:25**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322346	08/16/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	326167	09/07/17 06:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			322353	08/16/17 08:20	LDE	TAL SL
Total/NA	Analysis	9320		1	324022	08/24/17 10:15	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326912	09/12/17 10:25	RTM	TAL SL

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-141841-8**

**Date Collected: 08/09/17 13:15**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322346	08/16/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	326167	09/07/17 06:01	RTM	TAL SL
Total/NA	Prep	PrecSep_0			322353	08/16/17 08:20	LDE	TAL SL
Total/NA	Analysis	9320		1	324022	08/24/17 10:15	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326912	09/12/17 10:25	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-141841-9**

**Date Collected: 08/09/17 14:19**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322346	08/16/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	326167	09/07/17 06:01	RTM	TAL SL
Total/NA	Prep	PrecSep_0			322353	08/16/17 08:20	LDE	TAL SL
Total/NA	Analysis	9320		1	324022	08/24/17 10:16	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326912	09/12/17 10:25	RTM	TAL SL

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-141841-10**

**Date Collected: 08/09/17 11:53**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322346	08/16/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	326167	09/07/17 06:01	RTM	TAL SL
Total/NA	Prep	PrecSep_0			322353	08/16/17 08:20	LDE	TAL SL
Total/NA	Analysis	9320		1	324022	08/24/17 10:16	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326912	09/12/17 10:25	RTM	TAL SL

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-141841-11**

**Date Collected: 08/10/17 12:37**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322346	08/16/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	326167	09/07/17 06:01	RTM	TAL SL
Total/NA	Prep	PrecSep_0			322353	08/16/17 08:20	LDE	TAL SL
Total/NA	Analysis	9320		1	324022	08/24/17 10:16	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326912	09/12/17 10:25	RTM	TAL SL

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-141841-12**

**Date Collected: 08/10/17 10:07**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322346	08/16/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	326166	09/07/17 06:04	ALD	TAL SL
Total/NA	Prep	PrecSep_0			322353	08/16/17 08:20	LDE	TAL SL
Total/NA	Analysis	9320		1	324022	08/24/17 10:16	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326912	09/12/17 10:25	RTM	TAL SL

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: FB-2**

**Lab Sample ID: 400-141841-13**

**Date Collected: 08/09/17 14:23**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322346	08/16/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	326166	09/07/17 06:04	ALD	TAL SL
Total/NA	Prep	PrecSep_0			322353	08/16/17 08:20	LDE	TAL SL
Total/NA	Analysis	9320		1	324022	08/24/17 10:16	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326912	09/12/17 10:25	RTM	TAL SL

**Client Sample ID: FERB-1**

**Lab Sample ID: 400-141841-14**

**Date Collected: 08/09/17 11:30**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322346	08/16/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	326166	09/07/17 06:04	ALD	TAL SL
Total/NA	Prep	PrecSep_0			322353	08/16/17 08:20	LDE	TAL SL
Total/NA	Analysis	9320		1	324022	08/24/17 10:17	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326912	09/12/17 10:25	RTM	TAL SL

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-141841-15**

**Date Collected: 08/10/17 11:47**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322346	08/16/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	326166	09/07/17 06:04	ALD	TAL SL
Total/NA	Prep	PrecSep_0			322353	08/16/17 08:20	LDE	TAL SL
Total/NA	Analysis	9320		1	323926	08/24/17 10:17	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326912	09/12/17 10:25	RTM	TAL SL

**Client Sample ID: FERB-2**

**Lab Sample ID: 400-141841-16**

**Date Collected: 08/10/17 10:15**

**Matrix: Water**

**Date Received: 08/12/17 08:34**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			322346	08/16/17 07:55	LDE	TAL SL
Total/NA	Analysis	9315		1	326166	09/07/17 06:04	ALD	TAL SL
Total/NA	Prep	PrecSep_0			322353	08/16/17 08:20	LDE	TAL SL
Total/NA	Analysis	9320		1	323926	08/24/17 10:17	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	326912	09/12/17 10:25	RTM	TAL SL

## Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

TestAmerica Pensacola



# QC Association Summary

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
 SDG: Plant Wansley Ash Pond

## Rad

### Prep Batch: 322346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141841-1	DUP-2	Total/NA	Water	PrecSep-21	
400-141841-2	WGWC-12	Total/NA	Water	PrecSep-21	
400-141841-3	WGWC-11	Total/NA	Water	PrecSep-21	
400-141841-4	WGWC-10	Total/NA	Water	PrecSep-21	
400-141841-5	WGWC-13	Total/NA	Water	PrecSep-21	
400-141841-6	WGWA-5	Total/NA	Water	PrecSep-21	
400-141841-7	WGWA-4	Total/NA	Water	PrecSep-21	
400-141841-8	WGWC-17	Total/NA	Water	PrecSep-21	
400-141841-9	WGWC-15	Total/NA	Water	PrecSep-21	
400-141841-10	WGWC-16	Total/NA	Water	PrecSep-21	
400-141841-11	WGWC-8	Total/NA	Water	PrecSep-21	
400-141841-12	WGWC-9	Total/NA	Water	PrecSep-21	
400-141841-13	FB-2	Total/NA	Water	PrecSep-21	
400-141841-14	FERB-1	Total/NA	Water	PrecSep-21	
400-141841-15	WGWC-19	Total/NA	Water	PrecSep-21	
400-141841-16	FERB-2	Total/NA	Water	PrecSep-21	
MB 160-322346/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-322346/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-141841-4 DU	WGWC-10	Total/NA	Water	PrecSep-21	
400-141841-12 DU	WGWC-9	Total/NA	Water	PrecSep-21	

### Prep Batch: 322353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141841-1	DUP-2	Total/NA	Water	PrecSep_0	
400-141841-2	WGWC-12	Total/NA	Water	PrecSep_0	
400-141841-3	WGWC-11	Total/NA	Water	PrecSep_0	
400-141841-4	WGWC-10	Total/NA	Water	PrecSep_0	
400-141841-5	WGWC-13	Total/NA	Water	PrecSep_0	
400-141841-6	WGWA-5	Total/NA	Water	PrecSep_0	
400-141841-7	WGWA-4	Total/NA	Water	PrecSep_0	
400-141841-8	WGWC-17	Total/NA	Water	PrecSep_0	
400-141841-9	WGWC-15	Total/NA	Water	PrecSep_0	
400-141841-10	WGWC-16	Total/NA	Water	PrecSep_0	
400-141841-11	WGWC-8	Total/NA	Water	PrecSep_0	
400-141841-12	WGWC-9	Total/NA	Water	PrecSep_0	
400-141841-13	FB-2	Total/NA	Water	PrecSep_0	
400-141841-14	FERB-1	Total/NA	Water	PrecSep_0	
400-141841-15	WGWC-19	Total/NA	Water	PrecSep_0	
400-141841-16	FERB-2	Total/NA	Water	PrecSep_0	
MB 160-322353/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-322353/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-141841-4 DU	WGWC-10	Total/NA	Water	PrecSep_0	
400-141841-12 DU	WGWC-9	Total/NA	Water	PrecSep_0	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

## Method: 9315 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-322346/1-A**  
**Matrix: Water**  
**Analysis Batch: 326167**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 322346**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1134		0.0620	0.0629	1.00	0.0732	pCi/L	08/16/17 07:55	09/07/17 05:59	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					08/16/17 07:55	09/07/17 05:59	1

**Lab Sample ID: LCS 160-322346/2-A**  
**Matrix: Water**  
**Analysis Batch: 326167**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 322346**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	9.60	9.940		1.02	1.00	0.0697	pCi/L	103	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	97.6		40 - 110						

**Lab Sample ID: 400-141841-4 DU**  
**Matrix: Water**  
**Analysis Batch: 326167**

**Client Sample ID: WGWC-10**  
**Prep Type: Total/NA**  
**Prep Batch: 322346**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.0584	U	0.1246		0.0656	1.00	0.0722	pCi/L	0.54	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	92.6		40 - 110							

**Lab Sample ID: 400-141841-12 DU**  
**Matrix: Water**  
**Analysis Batch: 326166**

**Client Sample ID: WGWC-9**  
**Prep Type: Total/NA**  
**Prep Batch: 322346**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.0914		0.06412	U	0.0503	1.00	0.0675	pCi/L	0.26	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	93.5		40 - 110							

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

## Method: 9320 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-322353/1-A**  
**Matrix: Water**  
**Analysis Batch: 324022**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 322353**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	4.329		0.490	0.632	1.00	0.412	pCi/L	08/16/17 08:20	08/24/17 10:12	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110	08/16/17 08:20	08/24/17 10:12	1
Y Carrier	79.3		40 - 110	08/16/17 08:20	08/24/17 10:12	1

**Lab Sample ID: LCS 160-322353/2-A**  
**Matrix: Water**  
**Analysis Batch: 324022**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 322353**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.0	14.43		1.55	1.00	0.347	pCi/L	111	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	97.6		40 - 110
Y Carrier	80.4		40 - 110

**Lab Sample ID: 400-141841-4 DU**  
**Matrix: Water**  
**Analysis Batch: 324022**

**Client Sample ID: WGWC-10**  
**Prep Type: Total/NA**  
**Prep Batch: 322353**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.131	U	0.2489	U	0.305	1.00	0.503	pCi/L	0.21	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	92.6		40 - 110
Y Carrier	81.1		40 - 110

**Lab Sample ID: 400-141841-12 DU**  
**Matrix: Water**  
**Analysis Batch: 324022**

**Client Sample ID: WGWC-9**  
**Prep Type: Total/NA**  
**Prep Batch: 322353**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.288	U	0.5257		0.249	1.00	0.354	pCi/L	0.50	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	93.5		40 - 110
Y Carrier	91.6		40 - 110

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
 SDG: Plant Wansley Ash Pond

## Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

**Lab Sample ID: 400-141841-4 DU**  
**Matrix: Water**  
**Analysis Batch: 326912**

**Client Sample ID: WGWC-10**  
**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	0.189	U	0.3735	U	0.312	5.00	0.503	pCi/L	0.32	

**Lab Sample ID: 400-141841-12 DU**  
**Matrix: Water**  
**Analysis Batch: 326912**

**Client Sample ID: WGWC-9**  
**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	0.379		0.5898		0.254	5.00	0.354	pCi/L	0.43	

# Chain of Custody Record

**TestAmerica Pensacola 681-Atlanta**  
3355 McLemore Drive  
Pensacola, FL 32514  
Phone (850) 474-1001 Fax (850) 478-2671

**Client Information**  
 Sampler: C. Hurdle of, T. Payne TP, A. Ellis AVE  
 Lab PM: Whitmore, Cheyenne R  
 Client Contact: Joju Abraham  
 E-Mail: cheyenne.whitmore@testamericainc.com  
 Southern Company

**Due Date Requested:** \_\_\_\_\_  
**TAT Requested (days):** \_\_\_\_\_  
 Address: 241 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State, Zip: GA, 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)	Preservation Code	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470		TDS - SM 2540C : Cl <sub>2</sub> F <sub>2</sub> SO <sub>4</sub> - EPA 300	Radium 226 & 228 - SW-846 9315 & 9320	Total Number of Containers	Special Instructions/Note:
						Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	D	I	D					
WP-2	08.10.2107	--	G	W									3		
WGWC-12	08.10.2107	1150	G	W									3		
WGWC-11	08.10.2107	0945	G	W									3		
WGWC-10	08.10.2107	1410	G	W									4	Extra Rad volume for Lab QC	
FERB-1	08.09.2017	1130	G	W									3		
WGWC-13	08.09.2017	1415	G	W									3		
WGWA-5	08.09.2017	1015	G	W									3	400-141841 COC	
WGWA-4	08.09.2017	1125	G	W									3		
WGWC-17	08.09.2017	1315	G	W									3		
WGWC-15	08.09.2017	1419	G	W									3		
WGWC-16	08.09.2017	1153	G	W									3		

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify) \_\_\_\_\_

**Empty Kit Relinquished by:** \_\_\_\_\_  
 Relinquished by: *Anthony & Lili* Date: 08/14/2017 1500  
 Relinquished by: *AT* Date: 8/14/17 1630  
 Relinquished by: *AT* Date: 8/14/17 834  
 Relinquished by: *AT* Date: 8/12/17 834  
 Company: TA Company: TA Company: TA Company: TA

**Custody Seals Intact:**  Yes  No  
 Cooler Temperature(s) °C and Other Remarks: 0.0°C, 3.5°C IR7  
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Dispose By Lab  Archive For \_\_\_\_\_ Months



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-141841-2  
SDG Number: Plant Wansley Ash Pond

**Login Number: 141841**

**List Number: 1**

**Creator: Hughes, Nicholas T**

**List Source: TestAmerica Pensacola**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C, 3.5°C - IR7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <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 Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

## Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17 *
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-17-11	09-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

## Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-18
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-18
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	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	09-30-18
Missouri	State Program	7	780	06-30-18
Nevada	State Program	9	MO000542017-1	07-31-18
New Jersey	NELAP	2	MO002	06-30-18
New York	NELAP	2	11616	03-31-18

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Pensacola



# Accreditation/Certification Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-141841-2  
SDG: Plant Wansley Ash Pond

## 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	08-31-18
Pennsylvania	NELAP	3	68-00540	02-21-18
South Carolina	State Program	4	85002001	06-30-17 *
Texas	NELAP	6	T104704193-17-11	07-31-18
US Fish & Wildlife	Federal		058448	08-31-18
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-18
Virginia	NELAP	3	460230	06-14-18
Washington	State Program	10	C592	08-30-17 *
West Virginia DEP	State Program	3	381	08-31-18

\* 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: 400-142424-1

TestAmerica Sample Delivery Group: Plant Wansley Ash Pond

Client Project/Site: CCR - Plant Wansley

Sampling Event: Ash Pond

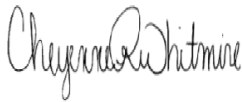
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Joju Abraham



Authorized for release by:

9/25/2017 7:50:35 PM

Cheyenne Whitmire, Project Manager II

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### LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-1  
SDG: Plant Wansley Ash Pond

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**Job ID: 400-142424-1**

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**Laboratory: TestAmerica Pensacola**

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**Narrative**

**Job Narrative  
400-142424-1**

**Metals**

Method(s) 6020: The method blank for preparation batch 366910 and analytical batch 368554 contained Arsenic 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) 7470A: The method blank for preparation batch 366512 and analytical batch 366863 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.

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# Detection Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-1  
SDG: Plant Wansley Ash Pond

## Client Sample ID: WGWA-5

## Lab Sample ID: 400-142424-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.0		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.015		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0025		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Mercury	0.000095	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

## Client Sample ID: FB-1

## Lab Sample ID: 400-142424-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0010	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Mercury	0.00011	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

## Client Sample ID: FERB-1

## Lab Sample ID: 400-142424-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.00011	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

## Client Sample ID: DUP-1

## Lab Sample ID: 400-142424-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.0		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.015		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	1.6		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0017	J	0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0025		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	6.0		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Method Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-1  
SDG: Plant Wansley Ash Pond

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
6020	Metals (ICP/MS)	SW846	TAL PEN
7470A	Mercury (CVAA)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN

#### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 Wansley

TestAmerica Job ID: 400-142424-1  
SDG: Plant Wansley Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-142424-1	WGWA-5	Water	08/25/17 12:50	08/26/17 08:34
400-142424-2	FB-1	Water	08/25/17 12:20	08/26/17 08:34
400-142424-3	FERB-1	Water	08/25/17 13:23	08/26/17 08:34
400-142424-4	DUP-1	Water	08/25/17 00:00	08/26/17 08:34

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# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-5**

**Lab Sample ID: 400-142424-1**

**Date Collected: 08/25/17 12:50**

**Matrix: Water**

**Date Received: 08/26/17 08:34**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>2.0</b>		1.0	0.89	mg/L			08/30/17 13:45	1
Fluoride	<0.082		0.20	0.082	mg/L			08/30/17 13:45	1
Sulfate	<0.70		1.0	0.70	mg/L			08/30/17 13:45	1

### 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		09/06/17 11:34	09/15/17 17:14	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/06/17 11:34	09/15/17 17:14	5
<b>Barium</b>	<b>0.015</b>		0.0025	0.00049	mg/L		09/06/17 11:34	09/15/17 17:14	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/06/17 11:34	09/15/17 17:14	5
Boron	<0.021		0.050	0.021	mg/L		09/06/17 11:34	09/15/17 17:14	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/06/17 11:34	09/15/17 17:14	5
<b>Calcium</b>	<b>1.5</b>		0.25	0.13	mg/L		09/06/17 11:34	09/15/17 17:14	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/06/17 11:34	09/15/17 17:14	5
<b>Cobalt</b>	<b>0.0025</b>		0.0025	0.00040	mg/L		09/06/17 11:34	09/15/17 17:14	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/06/17 11:34	09/15/17 17:14	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/06/17 11:34	09/15/17 17:14	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/06/17 11:34	09/15/17 17:14	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/06/17 11:34	09/15/17 17:14	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/06/17 11:34	09/15/17 17:14	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.000095</b>	<b>J B</b>	0.00020	0.000070	mg/L		09/01/17 09:21	09/05/17 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			08/31/17 12:33	1



# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: FB-1**  
**Date Collected: 08/25/17 12:20**  
**Date Received: 08/26/17 08:34**

**Lab Sample ID: 400-142424-2**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			08/30/17 16:02	1
Fluoride	<0.082		0.20	0.082	mg/L			08/30/17 16:02	1
Sulfate	<0.70		1.0	0.70	mg/L			08/30/17 16:02	1

### 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		09/06/17 11:34	09/15/17 17:19	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/06/17 11:34	09/15/17 17:19	5
<b>Barium</b>	<b>0.0010</b>	<b>J</b>	0.0025	0.00049	mg/L		09/06/17 11:34	09/15/17 17:19	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/06/17 11:34	09/15/17 17:19	5
Boron	<0.021		0.050	0.021	mg/L		09/06/17 11:34	09/15/17 17:19	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/06/17 11:34	09/15/17 17:19	5
Calcium	<0.13		0.25	0.13	mg/L		09/06/17 11:34	09/15/17 17:19	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/06/17 11:34	09/15/17 17:19	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/06/17 11:34	09/15/17 17:19	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/06/17 11:34	09/15/17 17:19	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/06/17 11:34	09/15/17 17:19	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/06/17 11:34	09/15/17 17:19	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/06/17 11:34	09/15/17 17:19	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/06/17 11:34	09/15/17 17:19	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.00011</b>	<b>J B</b>	0.00020	0.000070	mg/L		09/01/17 09:21	09/05/17 14:31	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			08/31/17 12:33	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: FERB-1**  
**Date Collected: 08/25/17 13:23**  
**Date Received: 08/26/17 08:34**

**Lab Sample ID: 400-142424-3**  
**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			08/30/17 17:11	1
Fluoride	<0.082		0.20	0.082	mg/L			08/30/17 17:11	1
Sulfate	<0.70		1.0	0.70	mg/L			08/30/17 17:11	1

**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		09/06/17 11:34	09/15/17 17:45	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/06/17 11:34	09/15/17 17:45	5
Barium	<0.00049		0.0025	0.00049	mg/L		09/06/17 11:34	09/15/17 17:45	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/06/17 11:34	09/15/17 17:45	5
Boron	<0.021		0.050	0.021	mg/L		09/06/17 11:34	09/15/17 17:45	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/06/17 11:34	09/15/17 17:45	5
Calcium	<0.13		0.25	0.13	mg/L		09/06/17 11:34	09/15/17 17:45	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/06/17 11:34	09/15/17 17:45	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/06/17 11:34	09/15/17 17:45	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/06/17 11:34	09/15/17 17:45	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/06/17 11:34	09/15/17 17:45	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/06/17 11:34	09/15/17 17:45	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/06/17 11:34	09/15/17 17:45	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/06/17 11:34	09/15/17 17:45	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		09/01/17 09:21	09/05/17 14:33	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			08/31/17 12:33	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: DUP-1**

**Date Collected: 08/25/17 00:00**

**Date Received: 08/26/17 08:34**

**Lab Sample ID: 400-142424-4**

**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>2.0</b>		1.0	0.89	mg/L			08/30/17 17:33	1
Fluoride	<0.082		0.20	0.082	mg/L			08/30/17 17:33	1
Sulfate	<0.70		1.0	0.70	mg/L			08/30/17 17:33	1

### 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		09/06/17 11:34	09/15/17 17:50	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		09/06/17 11:34	09/15/17 17:50	5
<b>Barium</b>	<b>0.015</b>		0.0025	0.00049	mg/L		09/06/17 11:34	09/15/17 17:50	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/06/17 11:34	09/15/17 17:50	5
Boron	<0.021		0.050	0.021	mg/L		09/06/17 11:34	09/15/17 17:50	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/06/17 11:34	09/15/17 17:50	5
<b>Calcium</b>	<b>1.6</b>		0.25	0.13	mg/L		09/06/17 11:34	09/15/17 17:50	5
<b>Chromium</b>	<b>0.0017</b>	<b>J</b>	0.0025	0.0011	mg/L		09/06/17 11:34	09/15/17 17:50	5
<b>Cobalt</b>	<b>0.0025</b>		0.0025	0.00040	mg/L		09/06/17 11:34	09/15/17 17:50	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/06/17 11:34	09/15/17 17:50	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/06/17 11:34	09/15/17 17:50	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/06/17 11:34	09/15/17 17:50	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/06/17 11:34	09/15/17 17:50	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/06/17 11:34	09/15/17 17:50	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.00011</b>	<b>J B</b>	0.00020	0.000070	mg/L		09/01/17 09:21	09/05/17 14:35	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>6.0</b>		5.0	3.4	mg/L			08/31/17 12:33	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-1  
SDG: Plant Wansley Ash Pond

## Qualifiers

### Metals

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	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 Wansley

TestAmerica Job ID: 400-142424-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-5**

**Date Collected: 08/25/17 12:50**

**Date Received: 08/26/17 08:34**

**Lab Sample ID: 400-142424-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	366346	08/30/17 13:45	JAW	TAL PEN
Total Recoverable	Prep	3005A			366910	09/06/17 11:34	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	368554	09/15/17 17:14	DRE	TAL PEN
Total/NA	Prep	7470A			366512	09/01/17 09:21	JAP	TAL PEN
Total/NA	Analysis	7470A		1	366863	09/05/17 14:29	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	366353	08/31/17 12:33	TET	TAL PEN

**Client Sample ID: FB-1**

**Date Collected: 08/25/17 12:20**

**Date Received: 08/26/17 08:34**

**Lab Sample ID: 400-142424-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	366346	08/30/17 16:02	JAW	TAL PEN
Total Recoverable	Prep	3005A			366910	09/06/17 11:34	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	368554	09/15/17 17:19	DRE	TAL PEN
Total/NA	Prep	7470A			366512	09/01/17 09:21	JAP	TAL PEN
Total/NA	Analysis	7470A		1	366863	09/05/17 14:31	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	366353	08/31/17 12:33	TET	TAL PEN

**Client Sample ID: FERB-1**

**Date Collected: 08/25/17 13:23**

**Date Received: 08/26/17 08:34**

**Lab Sample ID: 400-142424-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	366346	08/30/17 17:11	JAW	TAL PEN
Total Recoverable	Prep	3005A			366910	09/06/17 11:34	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	368554	09/15/17 17:45	DRE	TAL PEN
Total/NA	Prep	7470A			366512	09/01/17 09:21	JAP	TAL PEN
Total/NA	Analysis	7470A		1	366863	09/05/17 14:33	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	366353	08/31/17 12:33	TET	TAL PEN

**Client Sample ID: DUP-1**

**Date Collected: 08/25/17 00:00**

**Date Received: 08/26/17 08:34**

**Lab Sample ID: 400-142424-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	366346	08/30/17 17:33	JAW	TAL PEN
Total Recoverable	Prep	3005A			366910	09/06/17 11:34	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	368554	09/15/17 17:50	DRE	TAL PEN
Total/NA	Prep	7470A			366512	09/01/17 09:21	JAP	TAL PEN
Total/NA	Analysis	7470A		1	366863	09/05/17 14:35	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	366353	08/31/17 12:33	TET	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-1  
SDG: Plant Wansley Ash Pond

**Laboratory References:**

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

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# QC Association Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-1  
SDG: Plant Wansley Ash Pond

## HPLC/IC

### Analysis Batch: 366346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-142424-1	WGWA-5	Total/NA	Water	300.0	
400-142424-2	FB-1	Total/NA	Water	300.0	
400-142424-3	FERB-1	Total/NA	Water	300.0	
400-142424-4	DUP-1	Total/NA	Water	300.0	
MB 400-366346/4	Method Blank	Total/NA	Water	300.0	
LCS 400-366346/5	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-366346/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-142424-1 MS	WGWA-5	Total/NA	Water	300.0	
400-142424-1 MSD	WGWA-5	Total/NA	Water	300.0	

## Metals

### Prep Batch: 366512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-142424-1	WGWA-5	Total/NA	Water	7470A	
400-142424-2	FB-1	Total/NA	Water	7470A	
400-142424-3	FERB-1	Total/NA	Water	7470A	
400-142424-4	DUP-1	Total/NA	Water	7470A	
MB 400-366512/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-366512/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-142445-A-3-B MS	Matrix Spike	Total/NA	Water	7470A	
400-142445-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

### Analysis Batch: 366863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-142424-1	WGWA-5	Total/NA	Water	7470A	366512
400-142424-2	FB-1	Total/NA	Water	7470A	366512
400-142424-3	FERB-1	Total/NA	Water	7470A	366512
400-142424-4	DUP-1	Total/NA	Water	7470A	366512
MB 400-366512/14-A	Method Blank	Total/NA	Water	7470A	366512
LCS 400-366512/15-A	Lab Control Sample	Total/NA	Water	7470A	366512
400-142445-A-3-B MS	Matrix Spike	Total/NA	Water	7470A	366512
400-142445-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	366512

### Prep Batch: 366910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-142424-1	WGWA-5	Total Recoverable	Water	3005A	
400-142424-2	FB-1	Total Recoverable	Water	3005A	
400-142424-3	FERB-1	Total Recoverable	Water	3005A	
400-142424-4	DUP-1	Total Recoverable	Water	3005A	
MB 400-366910/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-366910/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-142387-J-1-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-142387-J-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Analysis Batch: 368554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-142424-1	WGWA-5	Total Recoverable	Water	6020	366910
400-142424-2	FB-1	Total Recoverable	Water	6020	366910
400-142424-3	FERB-1	Total Recoverable	Water	6020	366910

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-1  
SDG: Plant Wansley Ash Pond

## Metals (Continued)

### Analysis Batch: 368554 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-142424-4	DUP-1	Total Recoverable	Water	6020	366910
MB 400-366910/1-A ^5	Method Blank	Total Recoverable	Water	6020	366910
LCS 400-366910/2-A	Lab Control Sample	Total Recoverable	Water	6020	366910
400-142387-J-1-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	366910
400-142387-J-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	366910

## General Chemistry

### Analysis Batch: 366353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-142424-1	WGWA-5	Total/NA	Water	SM 2540C	
400-142424-2	FB-1	Total/NA	Water	SM 2540C	
400-142424-3	FERB-1	Total/NA	Water	SM 2540C	
400-142424-4	DUP-1	Total/NA	Water	SM 2540C	
MB 400-366353/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-366353/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-142424-1 DU	WGWA-5	Total/NA	Water	SM 2540C	



# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-1  
SDG: Plant Wansley Ash Pond

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 400-366346/4**  
**Matrix: Water**  
**Analysis Batch: 366346**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			08/30/17 12:37	1
Fluoride	<0.082		0.20	0.082	mg/L			08/30/17 12:37	1
Sulfate	<0.70		1.0	0.70	mg/L			08/30/17 12:37	1

**Lab Sample ID: LCS 400-366346/5**  
**Matrix: Water**  
**Analysis Batch: 366346**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.62		mg/L		96	90 - 110
Fluoride	10.0	10.1		mg/L		101	90 - 110
Sulfate	10.0	10.2		mg/L		102	90 - 110

**Lab Sample ID: LCSD 400-366346/6**  
**Matrix: Water**  
**Analysis Batch: 366346**

**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	10.0	9.64		mg/L		96	90 - 110	0	15
Fluoride	10.0	10.0		mg/L		100	90 - 110	0	15
Sulfate	10.0	10.2		mg/L		102	90 - 110	0	15

**Lab Sample ID: 400-142424-1 MS**  
**Matrix: Water**  
**Analysis Batch: 366346**

**Client Sample ID: WGWA-5**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.0		10.0	11.5		mg/L		95	80 - 120
Fluoride	<0.082		10.0	10.1		mg/L		101	80 - 120
Sulfate	<0.70		10.0	10.9		mg/L		109	80 - 120

**Lab Sample ID: 400-142424-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 366346**

**Client Sample ID: WGWA-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	2.0		10.0	11.5		mg/L		95	80 - 120	0	20
Fluoride	<0.082		10.0	10.1		mg/L		101	80 - 120	0	20
Sulfate	<0.70		10.0	11.0		mg/L		110	80 - 120	1	20

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 400-366910/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 368554**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 366910**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		09/06/17 11:34	09/15/17 16:02	5
Arsenic	0.000530	J	0.0013	0.00046	mg/L		09/06/17 11:34	09/15/17 16:02	5

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-1  
SDG: Plant Wansley Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 400-366910/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 368554**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 366910**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		09/06/17 11:34	09/15/17 16:02	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		09/06/17 11:34	09/15/17 16:02	5
Boron	<0.021		0.050	0.021	mg/L		09/06/17 11:34	09/15/17 16:02	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		09/06/17 11:34	09/15/17 16:02	5
Calcium	<0.13		0.25	0.13	mg/L		09/06/17 11:34	09/15/17 16:02	5
Chromium	<0.0011		0.0025	0.0011	mg/L		09/06/17 11:34	09/15/17 16:02	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		09/06/17 11:34	09/15/17 16:02	5
Lead	<0.00035		0.0013	0.00035	mg/L		09/06/17 11:34	09/15/17 16:02	5
Lithium	<0.0032		0.0050	0.0032	mg/L		09/06/17 11:34	09/15/17 16:02	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		09/06/17 11:34	09/15/17 16:02	5
Selenium	<0.00024		0.0013	0.00024	mg/L		09/06/17 11:34	09/15/17 16:02	5
Thallium	<0.000085		0.00050	0.000085	mg/L		09/06/17 11:34	09/15/17 16:02	5

**Lab Sample ID: LCS 400-366910/2-A**  
**Matrix: Water**  
**Analysis Batch: 368554**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 366910**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0511		mg/L		102	80 - 120
Arsenic	0.0500	0.0520		mg/L		104	80 - 120
Barium	0.0500	0.0478		mg/L		96	80 - 120
Beryllium	0.0500	0.0485		mg/L		97	80 - 120
Boron	0.100	0.0993		mg/L		99	80 - 120
Cadmium	0.0500	0.0517		mg/L		103	80 - 120
Calcium	5.00	4.69		mg/L		94	80 - 120
Chromium	0.0500	0.0505		mg/L		101	80 - 120
Cobalt	0.0500	0.0525		mg/L		105	80 - 120
Lead	0.0500	0.0507		mg/L		101	80 - 120
Lithium	0.0500	0.0552		mg/L		110	80 - 120
Molybdenum	0.0500	0.0540		mg/L		108	80 - 120
Selenium	0.0500	0.0516		mg/L		103	80 - 120
Thallium	0.0100	0.0107		mg/L		107	80 - 120

**Lab Sample ID: 400-142387-J-1-B MS ^5**  
**Matrix: Water**  
**Analysis Batch: 368554**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 366910**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0519		mg/L		104	75 - 125
Arsenic	<0.00046		0.0500	0.0523		mg/L		105	75 - 125
Barium	0.025		0.0500	0.0730		mg/L		96	75 - 125
Beryllium	<0.00034		0.0500	0.0474		mg/L		95	75 - 125
Boron	<0.021		0.100	0.110		mg/L		110	75 - 125
Cadmium	<0.00034		0.0500	0.0510		mg/L		102	75 - 125
Calcium	5.5		5.00	10.5		mg/L		101	75 - 125
Chromium	0.039		0.0500	0.0795		mg/L		81	75 - 125
Cobalt	0.00096	J	0.0500	0.0499		mg/L		98	75 - 125
Lead	<0.00035		0.0500	0.0491		mg/L		98	75 - 125
Lithium	<0.0032		0.0500	0.0552		mg/L		110	75 - 125

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-1  
SDG: Plant Wansley Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 400-142387-J-1-B MS ^5**  
**Matrix: Water**  
**Analysis Batch: 368554**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 366910**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	0.0039	J	0.0500	0.0600		mg/L		112	75 - 125
Selenium	0.00066	J	0.0500	0.0534		mg/L		105	75 - 125
Thallium	<0.000085		0.0100	0.0107		mg/L		107	75 - 125

**Lab Sample ID: 400-142387-J-1-C MSD ^5**  
**Matrix: Water**  
**Analysis Batch: 368554**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 366910**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0516		mg/L		103	75 - 125	1	20
Arsenic	<0.00046		0.0500	0.0525		mg/L		105	75 - 125	0	20
Barium	0.025		0.0500	0.0745		mg/L		99	75 - 125	2	20
Beryllium	<0.00034		0.0500	0.0483		mg/L		97	75 - 125	2	20
Boron	<0.021		0.100	0.110		mg/L		110	75 - 125	0	20
Cadmium	<0.00034		0.0500	0.0514		mg/L		103	75 - 125	1	20
Calcium	5.5		5.00	10.5		mg/L		101	75 - 125	0	20
Chromium	0.039		0.0500	0.0802		mg/L		82	75 - 125	1	20
Cobalt	0.00096	J	0.0500	0.0497		mg/L		98	75 - 125	0	20
Lead	<0.00035		0.0500	0.0485		mg/L		97	75 - 125	1	20
Lithium	<0.0032		0.0500	0.0543		mg/L		109	75 - 125	2	20
Molybdenum	0.0039	J	0.0500	0.0569		mg/L		106	75 - 125	5	20
Selenium	0.00066	J	0.0500	0.0512		mg/L		101	75 - 125	4	20
Thallium	<0.000085		0.0100	0.0107		mg/L		107	75 - 125	0	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 400-366512/14-A**  
**Matrix: Water**  
**Analysis Batch: 366863**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 366512**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000113	J	0.00020	0.000070	mg/L		09/01/17 08:59	09/05/17 14:01	1

**Lab Sample ID: LCS 400-366512/15-A**  
**Matrix: Water**  
**Analysis Batch: 366863**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 366512**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.00100		mg/L		99	80 - 120

**Lab Sample ID: 400-142445-A-3-B MS**  
**Matrix: Water**  
**Analysis Batch: 366863**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 366512**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00017	J B	0.00201	0.00210		mg/L		96	80 - 120

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-1  
 SDG: Plant Wansley Ash Pond

## Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID: 400-142445-A-3-C MSD**  
**Matrix: Water**  
**Analysis Batch: 366863**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 366512**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.00017	J B	0.00201	0.00202		mg/L		92	80 - 120	4	20

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 400-366353/1**  
**Matrix: Water**  
**Analysis Batch: 366353**

**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			08/31/17 12:33	1

**Lab Sample ID: LCS 400-366353/2**  
**Matrix: Water**  
**Analysis Batch: 366353**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	293	268		mg/L		91	78 - 122

**Lab Sample ID: 400-142424-1 DU**  
**Matrix: Water**  
**Analysis Batch: 366353**

**Client Sample ID: WGWA-5**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	<3.4		<3.4		mg/L		NC	5

3355 McLemore Drive  
Pensacola, FL 32514  
Phone (850) 474-1001 Fax (850) 478-2671

**Client Information**

Client Contact: Joju Abraham  
Company: Southern Company  
Address: 241 Ralph McGill Blvd SE B10185  
City: Atlanta  
State, Zip: GA, 30308  
Phone: 404-506-7239  
Email: JAbraham@southernco.com  
Project Name: Plant Wansley - Ash Pond  
Site: CCR

Carrier Tracking No(s):

Lab PM: Whitmire, Cheyenne R

Sampler: A. Ellis, H. Beaugh  
Phone:  
E-Mail: cheyenne.whitmire@testamericainc.com

**Analysis Requested**

Due Date Requested:  
TAT Requested (days):  
PO #:  
WO #:  
Project #:  
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 - AsNaO2
- P - Na2O4S
- Q - Na2SO3
- R - Na2SO3
- S - H2SO4
- T - TSP Dodecahydrate
- U - Acetone
- V - MCAA
- W - ph 4-5
- Z - other (specify)



400-142424 COC

**Sample Identification**

Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TDS - SM 2540C : Cl, F, SO4 - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320	Total Number of Containers	Special Instructions/Note:
DUP-GWA-5	08.25.2017	1250	G	W	X	X	1	1	2	4	Extra Rad for Lab QA/QC
DUP-B-1	08.25.2017	1220	G	W			1	1	1	3	
DUP-F-1	08.25.2017	1323	G	W			1	1	1	3	
DUP-1	08.25.2017	-	G	W			1	1	1	3	

**Possible Hazard Identification**

Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
Deliverable Requested: I, II, III, IV, Other (specify)

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**

Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

**Empty Kit Relinquished by:**

Relinquished by: *Whitmire*  
Relinquished by: *Whitmire*  
Relinquished by: *Whitmire*

**Date:**

Date/Time: 08/25/2017 1700  
Date/Time: 8/25/17 1820  
Date/Time: 8/25/17 1700

**Time:**

Received by: *Whitmire*  
Received by: *Whitmire*  
Received by: *Whitmire*

**Method of Shipment:**

Date/Time: 8/25/17 1700  
Date/Time: 8/26/17 834  
Date/Time: 5.2°C IR7

**Custody Seal No.:**

Δ Yes Δ No

**Cooler Temperature(s) °C and Other Remarks:**

5.2°C IR7



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-142424-1  
SDG Number: Plant Wansley Ash Pond

**Login Number: 142424**

**List Number: 1**

**Creator: Hughes, Nicholas T**

**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	5.2°C - IR7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# Accreditation/Certification Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-1  
SDG: Plant Wansley Ash Pond

## Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-18
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-17-12	09-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

# 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: 400-142424-2

TestAmerica Sample Delivery Group: Plant Wansley Ash Pond

Client Project/Site: CCR - Plant Wansley

Sampling Event: Ash Pond

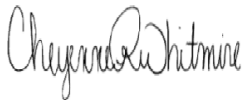
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Joju Abraham



Authorized for release by:

9/25/2017 7:51:22 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

Review your project  
results through

Total Access

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-2  
SDG: Plant Wansley Ash Pond

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**Job ID: 400-142424-2**

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**Laboratory: TestAmerica Pensacola**

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**Narrative**

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**Job Narrative  
400-142424-2**

**RAD**

Method(s) PrecSep\_0: Radium 228 Prep Batch 160-325102. A deviation from the Standard Operating Procedure (SOP) occurred. Details are as follows: Due to low Yttrium recovery on 400-142424-1DU the batch was put back into in Growth 09/07/2017. T1 time was adjusted to reflect the new start of the decay time.

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# Method Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-2  
SDG: Plant Wansley Ash Pond

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 Wansley

TestAmerica Job ID: 400-142424-2  
SDG: Plant Wansley Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-142424-1	WGWA-5	Water	08/25/17 12:50	08/26/17 08:34
400-142424-2	FB-1	Water	08/25/17 12:20	08/26/17 08:34
400-142424-3	FERB-1	Water	08/25/17 13:23	08/26/17 08:34
400-142424-4	DUP-1	Water	08/25/17 00:00	08/26/17 08:34

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# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-5**

**Lab Sample ID: 400-142424-1**

**Date Collected: 08/25/17 12:50**

**Matrix: Water**

**Date Received: 08/26/17 08:34**

**Method: 9315 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0411	U	0.0562	0.0564	1.00	0.0947	pCi/L	08/30/17 09:33	09/21/17 08:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.1		40 - 110					08/30/17 09:33	09/21/17 08:39	1

**Method: 9320 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.97		0.482	0.515	1.00	0.610	pCi/L	08/30/17 10:29	09/11/17 10:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.1		40 - 110					08/30/17 10:29	09/11/17 10:17	1
Y Carrier	74.8		40 - 110					08/30/17 10:29	09/11/17 10:17	1

**Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.02		0.485	0.518	5.00	0.610	pCi/L		09/21/17 17:31	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: FB-1**  
**Date Collected: 08/25/17 12:20**  
**Date Received: 08/26/17 08:34**

**Lab Sample ID: 400-142424-2**  
**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	0.00984	U	0.0454	0.0454	1.00	0.0894	pCi/L	08/30/17 09:33	09/21/17 08:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.1		40 - 110					08/30/17 09:33	09/21/17 08:40	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.518		0.273	0.277	1.00	0.407	pCi/L	08/30/17 10:29	09/11/17 10:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.1		40 - 110					08/30/17 10:29	09/11/17 10:17	1
Y Carrier	88.2		40 - 110					08/30/17 10:29	09/11/17 10:17	1

### Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.527		0.277	0.281	5.00	0.407	pCi/L		09/21/17 17:31	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: FERB-1**

**Lab Sample ID: 400-142424-3**

**Date Collected: 08/25/17 13:23**

**Matrix: Water**

**Date Received: 08/26/17 08:34**

### Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0329	U	0.0465	0.0466	1.00	0.0789	pCi/L	08/30/17 09:33	09/21/17 08:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.1		40 - 110					08/30/17 09:33	09/21/17 08:41	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.185	U	0.205	0.206	1.00	0.336	pCi/L	08/30/17 10:29	09/11/17 10:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.1		40 - 110					08/30/17 10:29	09/11/17 10:19	1
Y Carrier	88.2		40 - 110					08/30/17 10:29	09/11/17 10:19	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	0.217	U	0.210	0.211	5.00	0.336	pCi/L		09/21/17 17:31	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: DUP-1**

**Date Collected: 08/25/17 00:00**

**Date Received: 08/26/17 08:34**

**Lab Sample ID: 400-142424-4**

**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	0.0235	U	0.0489	0.0489	1.00	0.0896	pCi/L	08/30/17 09:33	09/21/17 08:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					08/30/17 09:33	09/21/17 08:40	1

### Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.201	U	0.215	0.215	1.00	0.350	pCi/L	08/30/17 10:29	09/11/17 10:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					08/30/17 10:29	09/11/17 10:19	1
Y Carrier	85.2		40 - 110					08/30/17 10:29	09/11/17 10:19	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	0.224	U	0.220	0.221	5.00	0.350	pCi/L		09/21/17 17:31	1



# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-2  
SDG: Plant Wansley Ash Pond

## Qualifiers

### Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-2  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-5**

**Date Collected: 08/25/17 12:50**

**Date Received: 08/26/17 08:34**

**Lab Sample ID: 400-142424-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			325086	08/30/17 09:33	LDE	TAL SL
Total/NA	Analysis	9315		1	328272	09/21/17 08:39	ALD	TAL SL
Total/NA	Prep	PrecSep_0			325102	08/30/17 10:29	LDE	TAL SL
Total/NA	Analysis	9320		1	326639	09/11/17 10:17	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	328342	09/21/17 17:31	RTM	TAL SL

**Client Sample ID: FB-1**

**Date Collected: 08/25/17 12:20**

**Date Received: 08/26/17 08:34**

**Lab Sample ID: 400-142424-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			325086	08/30/17 09:33	LDE	TAL SL
Total/NA	Analysis	9315		1	328272	09/21/17 08:40	ALD	TAL SL
Total/NA	Prep	PrecSep_0			325102	08/30/17 10:29	LDE	TAL SL
Total/NA	Analysis	9320		1	326639	09/11/17 10:17	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	328342	09/21/17 17:31	RTM	TAL SL

**Client Sample ID: FERB-1**

**Date Collected: 08/25/17 13:23**

**Date Received: 08/26/17 08:34**

**Lab Sample ID: 400-142424-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			325086	08/30/17 09:33	LDE	TAL SL
Total/NA	Analysis	9315		1	328272	09/21/17 08:41	ALD	TAL SL
Total/NA	Prep	PrecSep_0			325102	08/30/17 10:29	LDE	TAL SL
Total/NA	Analysis	9320		1	326639	09/11/17 10:19	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	328342	09/21/17 17:31	RTM	TAL SL

**Client Sample ID: DUP-1**

**Date Collected: 08/25/17 00:00**

**Date Received: 08/26/17 08:34**

**Lab Sample ID: 400-142424-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			325086	08/30/17 09:33	LDE	TAL SL
Total/NA	Analysis	9315		1	328272	09/21/17 08:40	ALD	TAL SL
Total/NA	Prep	PrecSep_0			325102	08/30/17 10:29	LDE	TAL SL
Total/NA	Analysis	9320		1	326639	09/11/17 10:19	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	328342	09/21/17 17:31	RTM	TAL SL

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# QC Association Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-2  
SDG: Plant Wansley Ash Pond

## Rad

### Prep Batch: 325086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-142424-1	WGWA-5	Total/NA	Water	PrecSep-21	
400-142424-2	FB-1	Total/NA	Water	PrecSep-21	
400-142424-3	FERB-1	Total/NA	Water	PrecSep-21	
400-142424-4	DUP-1	Total/NA	Water	PrecSep-21	
MB 160-325086/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-325086/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-142424-1 DU	WGWA-5	Total/NA	Water	PrecSep-21	

### Prep Batch: 325102

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-142424-1	WGWA-5	Total/NA	Water	PrecSep_0	
400-142424-2	FB-1	Total/NA	Water	PrecSep_0	
400-142424-3	FERB-1	Total/NA	Water	PrecSep_0	
400-142424-4	DUP-1	Total/NA	Water	PrecSep_0	
MB 160-325102/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-325102/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-142424-1 DU	WGWA-5	Total/NA	Water	PrecSep_0	

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-2  
 SDG: Plant Wansley Ash Pond

## Method: 9315 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-325086/1-A**  
**Matrix: Water**  
**Analysis Batch: 328273**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 325086**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.02074	U	0.0443	0.0444	1.00	0.0824	pCi/L	08/30/17 09:33	09/21/17 08:44	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					08/30/17 09:33	09/21/17 08:44	1

**Lab Sample ID: LCS 160-325086/2-A**  
**Matrix: Water**  
**Analysis Batch: 328273**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 325086**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	9.60	8.948		0.948	1.00	0.0823	pCi/L	93	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	91.4		40 - 110						

**Lab Sample ID: 400-142424-1 DU**  
**Matrix: Water**  
**Analysis Batch: 328272**

**Client Sample ID: WGWA-5**  
**Prep Type: Total/NA**  
**Prep Batch: 325086**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.0411	U	0.06137	U	0.0589	1.00	0.0897	pCi/L	0.18	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	92.0		40 - 110							

## Method: 9320 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-325102/1-A**  
**Matrix: Water**  
**Analysis Batch: 326639**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 325102**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.7335		0.261	0.270	1.00	0.349	pCi/L	08/30/17 10:29	09/11/17 10:15	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					08/30/17 10:29	09/11/17 10:15	1
Y Carrier	86.7		40 - 110					08/30/17 10:29	09/11/17 10:15	1

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-2  
 SDG: Plant Wansley Ash Pond

## Method: 9320 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-325102/2-A**  
**Matrix: Water**  
**Analysis Batch: 326639**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 325102**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	12.9	14.65		1.58	1.00	0.325	pCi/L	113	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	91.4		40 - 110
Y Carrier	85.6		40 - 110

**Lab Sample ID: 400-142424-1 DU**  
**Matrix: Water**  
**Analysis Batch: 326639**

**Client Sample ID: WGWA-5**  
**Prep Type: Total/NA**  
**Prep Batch: 325102**

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	1.97		1.336		0.335	1.00	0.361	pCi/L	0.75	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	92.0		40 - 110
Y Carrier	86.4		40 - 110

## Method: Ra226\_Ra228 - Combined Radium-226 and Radium-228

**Lab Sample ID: 400-142424-1 DU**  
**Matrix: Water**  
**Analysis Batch: 328342**

**Client Sample ID: WGWA-5**  
**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	2.02		1.398		0.340	5.00	0.361	pCi/L	0.72	

3355 McLemore Drive  
Pensacola, FL 32514  
Phone (850) 474-1001 Fax (850) 478-2671

**Client Information**

Client Contact: Joju Abraham  
Company: Southern Company  
Address: 241 Ralph McGill Blvd SE B10185  
City: Atlanta  
State, Zip: GA, 30308  
Phone: 404-506-7239  
Email: JAbraham@southernco.com  
Project Name: Plant Wansley - Ash Pond  
Site: CCR

Carrier Tracking No(s):

Lab PM: Whitmire, Cheyenne R

E-Mail: cheyenne.whitmire@testamericainc.com

**Analysis Requested**

Due Date Requested:

TAT Requested (days):

PO #:

WO #:

Project #:

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 - AsNaO2
- P - Na2O4S
- Q - Na2SO3
- R - Na2SO3
- S - H2SO4
- T - TSP Dodecahydrate
- U - Acetone
- V - MCAA
- W - ph 4-5
- Z - other (specify)



400-142424 COC

**Sample Identification**

Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TDS - SM 2540C : Cl, F, SO4 - EPA 300	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320	Total Number of Containers	Special Instructions/Note:
01/GWA-5	08.25.2017	1250	G	W	X	X	1	1	2	4	Extra Rad for Lab QA/QC
02/B-1	08.25.2017	1220	G	W			1	1	1	3	
03/BERB-1	08.25.2017	1323	G	W			1	1	1	3	
04/DUP-1	08.25.2017	-	G	W			1	1	1	3	

**Possible Hazard Identification**

Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

**Empty Kit Relinquished by:**

Relinquished by: *Joju Abraham*  
Relinquished by: *Joju Abraham*  
Relinquished by: *Joju Abraham*

Date:

Date/Time: 08/25/2017 1700  
Date/Time: 8/25/17 1820  
Date/Time: 8/25/17 1700

Method of Shipment:

Received by: *Joju Abraham*  
Received by: *Joju Abraham*  
Received by: *Joju Abraham*

Custody Seal No.: *IR7*

Cooler Temperature(s) °C and Other Remarks:

5.2°C



## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-142424-2  
SDG Number: Plant Wansley Ash Pond

**Login Number: 142424**

**List Number: 1**

**Creator: Hughes, Nicholas T**

**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	5.2°C - IR7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Accreditation/Certification Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-2  
SDG: Plant Wansley Ash Pond

## Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-18
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-17-12	09-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

## Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-18
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-18
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17 *
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-18
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-18
Missouri	State Program	7	780	06-30-18
Nevada	State Program	9	MO000542017-1	07-31-18
New Jersey	NELAP	2	MO002	06-30-18
New York	NELAP	2	11616	03-31-18

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.



# Accreditation/Certification Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-142424-2  
SDG: Plant Wansley Ash Pond

## Laboratory: TestAmerica St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
North Dakota	State Program	8	R207	06-30-18
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-18
Pennsylvania	NELAP	3	68-00540	02-21-18
South Carolina	State Program	4	85002001	06-30-17 *
Texas	NELAP	6	T104704193-17-11	07-31-18
US Fish & Wildlife	Federal		058448	08-31-18
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-18
Virginia	NELAP	3	460230	06-14-18
Washington	State Program	10	C592	08-30-18
West Virginia DEP	State Program	3	381	08-31-18

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica 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: 400-144550-1

TestAmerica Sample Delivery Group: Plant Wansley Ash Pond

Client Project/Site: CCR - Plant Wansley

Sampling Event: Ash Pond

For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Joju Abraham



Authorized for release by:

10/27/2017 11:05:26 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

[cheyenne.whitmire@testamericainc.com](mailto:cheyenne.whitmire@testamericainc.com)

### LINKS

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[www.testamericainc.com](http://www.testamericainc.com)

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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 Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

**Job ID: 400-144550-1**

**Laboratory: TestAmerica Pensacola**

## Narrative

### Job Narrative 400-144550-1

#### HPLC/IC

Method(s) 300.0: The following sample was diluted due to high conductivity: WGWC-16 (400-144550-13). Elevated reporting limits (RL) are provided.

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: WGWC-16 (400-144550-13), DUP-1 (400-144550-14), WGWC-15 (400-144550-16) and WGWC-8 (400-144550-23). Elevated reporting limits (RLs) are provided.

#### Metals

Method(s) 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: WGWC-16 (400-144550-13) and DUP-1 (400-144550-14). Elevated reporting limits (RLs) are provided.



# Detection Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

## Client Sample ID: WGWA-1

## Lab Sample ID: 400-144550-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.6		1.0	0.89	mg/L	1		300.0	Total/NA
Calcium	1.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	44		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-2

## Lab Sample ID: 400-144550-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.5		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.18	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	1.3		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	21		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	140		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FB-1

## Lab Sample ID: 400-144550-3

No Detections.

## Client Sample ID: FERB-1

## Lab Sample ID: 400-144550-4

No Detections.

## Client Sample ID: WGWA-18

## Lab Sample ID: 400-144550-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.9		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.090	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	11		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	23		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	90		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-7

## Lab Sample ID: 400-144550-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.8		1.0	0.89	mg/L	1		300.0	Total/NA
Calcium	0.93		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	42		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-4

## Lab Sample ID: 400-144550-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.2		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.14	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	6.8		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	17		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	110		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 Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

## Client Sample ID: FERB-2

## Lab Sample ID: 400-144550-8

No Detections.

## Client Sample ID: WGWA-5

## Lab Sample ID: 400-144550-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.1		1.0	0.89	mg/L	1		300.0	Total/NA
Calcium	1.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	4.0	J	5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-6

## Lab Sample ID: 400-144550-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.3		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.098	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	8.3		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	29		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	98		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWA-3

## Lab Sample ID: 400-144550-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.6		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	0.72	J	1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	2.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	10		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-17

## Lab Sample ID: 400-144550-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.5		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.14	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	13		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	10		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	74		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-16

## Lab Sample ID: 400-144550-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	320		10	8.9	mg/L	10		300.0	Total/NA
Sulfate	720		20	14	mg/L	20		300.0	Total/NA
Boron - DL	6.8		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	360		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	1900		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: DUP-1

## Lab Sample ID: 400-144550-14

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

## Client Sample ID: DUP-1 (Continued)

## Lab Sample ID: 400-144550-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	330		20	18	mg/L	20		300.0	Total/NA
Fluoride	0.15	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	740		20	14	mg/L	20		300.0	Total/NA
Boron - DL	6.9		0.50	0.21	mg/L	50		6020	Total Recoverable
Calcium - DL	360		2.5	1.3	mg/L	50		6020	Total Recoverable
Total Dissolved Solids	1900		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-14A

## Lab Sample ID: 400-144550-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.2		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	3.4		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	3.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	68		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-15

## Lab Sample ID: 400-144550-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.0		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.88		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	48		20	14	mg/L	20		300.0	Total/NA
Calcium	31		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	200		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-13

## Lab Sample ID: 400-144550-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.2		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.28		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	6.1		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	7.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	110		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-11

## Lab Sample ID: 400-144550-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.0		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	1.9		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	2.7		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	54		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-12

## Lab Sample ID: 400-144550-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.1		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.091	J	0.20	0.082	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Detection Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

## Client Sample ID: WGWC-12 (Continued)

## Lab Sample ID: 400-144550-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	14		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	16		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	100		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: FB-2

## Lab Sample ID: 400-144550-20

No Detections.

## Client Sample ID: WGWC-10

## Lab Sample ID: 400-144550-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.3		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.14	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	1.9		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	8.6		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	72		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-9

## Lab Sample ID: 400-144550-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.4		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	1.5		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	37		1.0	0.70	mg/L	1		300.0	Total/NA
Boron	0.36		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	8.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	120		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-8

## Lab Sample ID: 400-144550-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	60		5.0	4.5	mg/L	5		300.0	Total/NA
Fluoride	0.35		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	180		5.0	3.5	mg/L	5		300.0	Total/NA
Boron	1.8		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	60		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	450		5.0	3.4	mg/L	1		SM 2540C	Total/NA

## Client Sample ID: WGWC-19

## Lab Sample ID: 400-144550-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.3		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.36		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	3.6		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	9.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	100		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 Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: DUP-2**

**Lab Sample ID: 400-144550-25**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.3		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.38		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	3.5		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	9.5		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	66		5.0	3.4	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

# Method Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
6020	Metals (ICP/MS)	SW846	TAL PEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PEN

#### Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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 Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-144550-1	WGWA-1	Water	10/10/17 10:10	10/12/17 08:31
400-144550-2	WGWA-2	Water	10/10/17 10:50	10/12/17 08:31
400-144550-3	FB-1	Water	10/10/17 09:56	10/12/17 08:31
400-144550-4	FERB-1	Water	10/10/17 10:30	10/12/17 08:31
400-144550-5	WGWA-18	Water	10/11/17 11:10	10/13/17 08:31
400-144550-6	WGWA-7	Water	10/11/17 10:00	10/13/17 08:31
400-144550-7	WGWA-4	Water	10/11/17 10:45	10/13/17 08:31
400-144550-8	FERB-2	Water	10/11/17 10:15	10/13/17 08:31
400-144550-9	WGWA-5	Water	10/11/17 10:40	10/13/17 08:31
400-144550-10	WGWA-6	Water	10/11/17 11:35	10/13/17 08:31
400-144550-11	WGWA-3	Water	10/11/17 09:45	10/13/17 08:31
400-144550-12	WGWC-17	Water	10/11/17 12:50	10/13/17 08:31
400-144550-13	WGWC-16	Water	10/11/17 10:16	10/13/17 08:31
400-144550-14	DUP-1	Water	10/11/17 00:00	10/13/17 08:31
400-144550-15	WGWC-14A	Water	10/11/17 13:15	10/13/17 08:31
400-144550-16	WGWC-15	Water	10/11/17 13:05	10/13/17 08:31
400-144550-17	WGWC-13	Water	10/12/17 09:20	10/14/17 09:09
400-144550-18	WGWC-11	Water	10/12/17 10:06	10/14/17 09:09
400-144550-19	WGWC-12	Water	10/12/17 10:57	10/14/17 09:09
400-144550-20	FB-2	Water	10/12/17 10:20	10/14/17 09:09
400-144550-21	WGWC-10	Water	10/12/17 10:30	10/14/17 09:09
400-144550-22	WGWC-9	Water	10/12/17 11:50	10/14/17 09:09
400-144550-23	WGWC-8	Water	10/12/17 10:07	10/14/17 09:09
400-144550-24	WGWC-19	Water	10/12/17 11:10	10/14/17 09:09
400-144550-25	DUP-2	Water	10/12/17 00:00	10/14/17 09:09

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-1**  
**Date Collected: 10/10/17 10:10**  
**Date Received: 10/12/17 08:31**

**Lab Sample ID: 400-144550-1**  
**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.6</b>		1.0	0.89	mg/L			10/21/17 00:28	1
Fluoride	<0.082		0.20	0.082	mg/L			10/21/17 00:28	1
Sulfate	<0.70		1.0	0.70	mg/L			10/21/17 00:28	1

**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		10/16/17 11:02	10/18/17 16:23	5
<b>Calcium</b>	<b>1.2</b>		0.25	0.13	mg/L		10/16/17 11:02	10/18/17 16:23	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>44</b>		5.0	3.4	mg/L			10/16/17 13:07	1

- 1
- 2
- 3
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- 5
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- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-2**  
**Date Collected: 10/10/17 10:50**  
**Date Received: 10/12/17 08:31**

**Lab Sample ID: 400-144550-2**  
**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.5		1.0	0.89	mg/L			10/21/17 00:51	1
Fluoride	0.18	J	0.20	0.082	mg/L			10/21/17 00:51	1
Sulfate	1.3		1.0	0.70	mg/L			10/21/17 00:51	1

**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		10/16/17 11:02	10/18/17 16:28	5
Calcium	21		0.25	0.13	mg/L		10/16/17 11:02	10/18/17 16:28	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	140		5.0	3.4	mg/L			10/16/17 13:07	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: FB-1**  
**Date Collected: 10/10/17 09:56**  
**Date Received: 10/12/17 08:31**

**Lab Sample ID: 400-144550-3**  
**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/21/17 01:14	1
Fluoride	<0.082		0.20	0.082	mg/L			10/21/17 01:14	1
Sulfate	<0.70		1.0	0.70	mg/L			10/21/17 01:14	1

**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		10/16/17 11:02	10/18/17 16:32	5
Calcium	<0.13		0.25	0.13	mg/L		10/16/17 11:02	10/18/17 16:32	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			10/16/17 13:07	1



# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: FERB-1**  
**Date Collected: 10/10/17 10:30**  
**Date Received: 10/12/17 08:31**

**Lab Sample ID: 400-144550-4**  
**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/21/17 01:59	1
Fluoride	<0.082		0.20	0.082	mg/L			10/21/17 01:59	1
Sulfate	<0.70		1.0	0.70	mg/L			10/21/17 01:59	1

**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		10/16/17 11:02	10/18/17 16:37	5
Calcium	<0.13		0.25	0.13	mg/L		10/16/17 11:02	10/18/17 16:37	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			10/16/17 13:07	1



# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-18**  
**Date Collected: 10/11/17 11:10**  
**Date Received: 10/13/17 08:31**

**Lab Sample ID: 400-144550-5**  
**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.9		1.0	0.89	mg/L			10/20/17 08:06	1
Fluoride	0.090	J	0.20	0.082	mg/L			10/20/17 08:06	1
Sulfate	11		1.0	0.70	mg/L			10/20/17 08:06	1

**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		10/16/17 11:02	10/18/17 16:41	5
Calcium	23		0.25	0.13	mg/L		10/16/17 11:02	10/18/17 16:41	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	90		5.0	3.4	mg/L			10/18/17 13:07	1



# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-7**  
**Date Collected: 10/11/17 10:00**  
**Date Received: 10/13/17 08:31**

**Lab Sample ID: 400-144550-6**  
**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>1.8</b>		1.0	0.89	mg/L			10/20/17 08:29	1
Fluoride	<0.082		0.20	0.082	mg/L			10/20/17 08:29	1
Sulfate	<0.70		1.0	0.70	mg/L			10/20/17 08:29	1

**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		10/16/17 11:02	10/18/17 17:08	5
<b>Calcium</b>	<b>0.93</b>		0.25	0.13	mg/L		10/16/17 11:02	10/18/17 17:08	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>42</b>		5.0	3.4	mg/L			10/18/17 13:07	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-4**  
**Date Collected: 10/11/17 10:45**  
**Date Received: 10/13/17 08:31**

**Lab Sample ID: 400-144550-7**  
**Matrix: Water**

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.2		1.0	0.89	mg/L			10/20/17 09:38	1
Fluoride	0.14	J	0.20	0.082	mg/L			10/20/17 09:38	1
Sulfate	6.8		1.0	0.70	mg/L			10/20/17 09:38	1

## 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		10/16/17 11:02	10/18/17 17:15	5
Calcium	17		0.25	0.13	mg/L		10/16/17 11:02	10/18/17 17:15	5

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	110		5.0	3.4	mg/L			10/18/17 13:07	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: FERB-2**  
**Date Collected: 10/11/17 10:15**  
**Date Received: 10/13/17 08:31**

**Lab Sample ID: 400-144550-8**  
**Matrix: Water**

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/20/17 10:00	1
Fluoride	<0.082		0.20	0.082	mg/L			10/20/17 10:00	1
Sulfate	<0.70		1.0	0.70	mg/L			10/20/17 10:00	1

## 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		10/16/17 11:02	10/18/17 17:20	5
Calcium	<0.13		0.25	0.13	mg/L		10/16/17 11:02	10/18/17 17:20	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			10/18/17 13:07	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-5**  
**Date Collected: 10/11/17 10:40**  
**Date Received: 10/13/17 08:31**

**Lab Sample ID: 400-144550-9**  
**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>2.1</b>		1.0	0.89	mg/L			10/20/17 10:23	1
Fluoride	<0.082		0.20	0.082	mg/L			10/20/17 10:23	1
Sulfate	<0.70		1.0	0.70	mg/L			10/20/17 10:23	1

**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		10/16/17 11:02	10/18/17 17:24	5
<b>Calcium</b>	<b>1.5</b>		0.25	0.13	mg/L		10/16/17 11:02	10/18/17 17:24	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>4.0</b>	<b>J</b>	5.0	3.4	mg/L			10/18/17 13:07	1

- 1
- 2
- 3
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- 11
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- 13
- 14

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-144550-10**

**Date Collected: 10/11/17 11:35**

**Matrix: Water**

**Date Received: 10/13/17 08:31**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.3		1.0	0.89	mg/L			10/20/17 10:46	1
Fluoride	0.098	J	0.20	0.082	mg/L			10/20/17 10:46	1
Sulfate	8.3		1.0	0.70	mg/L			10/20/17 10:46	1

### 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		10/16/17 11:02	10/18/17 17:29	5
Calcium	29		0.25	0.13	mg/L		10/16/17 11:02	10/18/17 17:29	5

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	98		5.0	3.4	mg/L			10/18/17 13:07	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-3**  
**Date Collected: 10/11/17 09:45**  
**Date Received: 10/13/17 08:31**

**Lab Sample ID: 400-144550-11**  
**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.6		1.0	0.89	mg/L			10/20/17 11:09	1
Fluoride	<0.082		0.20	0.082	mg/L			10/20/17 11:09	1
Sulfate	0.72	J	1.0	0.70	mg/L			10/20/17 11:09	1

**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		10/16/17 11:02	10/18/17 17:33	5
Calcium	2.1		0.25	0.13	mg/L		10/16/17 11:02	10/18/17 17:33	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10		5.0	3.4	mg/L			10/18/17 13:07	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-144550-12**

**Date Collected: 10/11/17 12:50**

**Matrix: Water**

**Date Received: 10/13/17 08:31**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.5		1.0	0.89	mg/L			10/20/17 11:54	1
Fluoride	0.14	J	0.20	0.082	mg/L			10/20/17 11:54	1
Sulfate	13		1.0	0.70	mg/L			10/20/17 11:54	1

**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		10/16/17 12:49	10/18/17 20:51	5
Calcium	10		0.25	0.13	mg/L		10/16/17 12:49	10/18/17 20:51	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	74		5.0	3.4	mg/L			10/18/17 13:07	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-144550-13**

**Date Collected: 10/11/17 10:16**

**Matrix: Water**

**Date Received: 10/13/17 08:31**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	320		10	8.9	mg/L			10/20/17 12:17	10
Fluoride	<0.82		2.0	0.82	mg/L			10/20/17 12:17	10
Sulfate	720		20	14	mg/L			10/20/17 23:42	20

**Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.8		0.50	0.21	mg/L		10/16/17 12:49	10/18/17 21:14	50
Calcium	360		2.5	1.3	mg/L		10/16/17 12:49	10/18/17 21:14	50

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1900		5.0	3.4	mg/L			10/18/17 13:07	1



# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: DUP-1**

**Date Collected: 10/11/17 00:00**

**Date Received: 10/13/17 08:31**

**Lab Sample ID: 400-144550-14**

**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	330		20	18	mg/L			10/21/17 00:05	20
Fluoride	0.15	J	0.20	0.082	mg/L			10/20/17 12:40	1
Sulfate	740		20	14	mg/L			10/21/17 00:05	20

**Method: 6020 - Metals (ICP/MS) - Total Recoverable - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6.9		0.50	0.21	mg/L		10/16/17 12:49	10/19/17 12:40	50
Calcium	360		2.5	1.3	mg/L		10/16/17 12:49	10/19/17 12:40	50

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1900		5.0	3.4	mg/L			10/18/17 13:07	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-14A**

**Lab Sample ID: 400-144550-15**

**Date Collected: 10/11/17 13:15**

**Matrix: Water**

**Date Received: 10/13/17 08:31**

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>2.2</b>		1.0	0.89	mg/L			10/20/17 13:03	1
Fluoride	<0.082		0.20	0.082	mg/L			10/20/17 13:03	1
<b>Sulfate</b>	<b>3.4</b>		1.0	0.70	mg/L			10/20/17 13:03	1

## 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		10/16/17 12:49	10/19/17 12:30	5
<b>Calcium</b>	<b>3.8</b>		0.25	0.13	mg/L		10/16/17 12:49	10/19/17 12:30	5

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>68</b>		5.0	3.4	mg/L			10/18/17 13:49	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-144550-16**

**Date Collected: 10/11/17 13:05**

**Matrix: Water**

**Date Received: 10/13/17 08:31**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.0		1.0	0.89	mg/L			10/20/17 14:11	1
Fluoride	0.88		0.20	0.082	mg/L			10/20/17 14:11	1
Sulfate	48		20	14	mg/L			10/21/17 04:16	20

**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		10/16/17 12:49	10/18/17 21:50	5
Calcium	31		0.25	0.13	mg/L		10/16/17 12:49	10/18/17 21:50	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	200		5.0	3.4	mg/L			10/18/17 13:49	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-13**

**Date Collected: 10/12/17 09:20**

**Date Received: 10/14/17 09:09**

**Lab Sample ID: 400-144550-17**

**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.2		1.0	0.89	mg/L			10/21/17 16:28	1
Fluoride	0.28		0.20	0.082	mg/L			10/21/17 16:28	1
Sulfate	6.1		1.0	0.70	mg/L			10/21/17 16:28	1

**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		10/16/17 12:49	10/18/17 21:54	5
Calcium	7.0		0.25	0.13	mg/L		10/16/17 12:49	10/18/17 21:54	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	110		5.0	3.4	mg/L			10/19/17 13:14	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-144550-18**

**Date Collected: 10/12/17 10:06**

**Matrix: Water**

**Date Received: 10/14/17 09:09**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>3.0</b>		1.0	0.89	mg/L			10/21/17 17:36	1
Fluoride	<0.082		0.20	0.082	mg/L			10/21/17 17:36	1
<b>Sulfate</b>	<b>1.9</b>		1.0	0.70	mg/L			10/21/17 17:36	1

**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		10/16/17 12:49	10/18/17 21:59	5
<b>Calcium</b>	<b>2.7</b>		0.25	0.13	mg/L		10/16/17 12:49	10/18/17 21:59	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids</b>	<b>54</b>		5.0	3.4	mg/L			10/19/17 13:14	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-12**

**Date Collected: 10/12/17 10:57**

**Date Received: 10/14/17 09:09**

**Lab Sample ID: 400-144550-19**

**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.1		1.0	0.89	mg/L			10/21/17 17:59	1
Fluoride	0.091	J	0.20	0.082	mg/L			10/21/17 17:59	1
Sulfate	14		1.0	0.70	mg/L			10/21/17 17:59	1

**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		10/16/17 12:49	10/18/17 22:03	5
Calcium	16		0.25	0.13	mg/L		10/16/17 12:49	10/18/17 22:03	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	100		5.0	3.4	mg/L			10/19/17 13:14	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: FB-2**  
**Date Collected: 10/12/17 10:20**  
**Date Received: 10/14/17 09:09**

**Lab Sample ID: 400-144550-20**  
**Matrix: Water**

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/21/17 18:22	1
Fluoride	<0.082		0.20	0.082	mg/L			10/21/17 18:22	1
Sulfate	<0.70		1.0	0.70	mg/L			10/21/17 18:22	1

## 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		10/16/17 12:49	10/18/17 22:08	5
Calcium	<0.13		0.25	0.13	mg/L		10/16/17 12:49	10/18/17 22:08	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			10/19/17 13:14	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-10**

**Date Collected: 10/12/17 10:30**

**Date Received: 10/14/17 09:09**

**Lab Sample ID: 400-144550-21**

**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.3		1.0	0.89	mg/L			10/22/17 09:12	1
Fluoride	0.14	J	0.20	0.082	mg/L			10/22/17 09:12	1
Sulfate	1.9		1.0	0.70	mg/L			10/22/17 09:12	1

**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		10/16/17 12:49	10/18/17 22:12	5
Calcium	8.6		0.25	0.13	mg/L		10/16/17 12:49	10/18/17 22:12	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	72		5.0	3.4	mg/L			10/19/17 13:14	1





# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-144550-22**

**Date Collected: 10/12/17 11:50**

**Matrix: Water**

**Date Received: 10/14/17 09:09**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4		1.0	0.89	mg/L			10/21/17 19:53	1
Fluoride	1.5		0.20	0.082	mg/L			10/21/17 19:53	1
Sulfate	37		1.0	0.70	mg/L			10/21/17 19:53	1

**Method: 6020 - Metals (ICP/MS) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.36		0.050	0.021	mg/L		10/16/17 12:49	10/18/17 22:17	5
Calcium	8.2		0.25	0.13	mg/L		10/16/17 12:49	10/18/17 22:17	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	120		5.0	3.4	mg/L			10/19/17 13:14	1

# Client Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-8**  
**Date Collected: 10/12/17 10:07**  
**Date Received: 10/14/17 09:09**

**Lab Sample ID: 400-144550-23**  
**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	60		5.0	4.5	mg/L			10/23/17 13:57	5
Fluoride	0.35		0.20	0.082	mg/L			10/21/17 20:16	1
Sulfate	180		5.0	3.5	mg/L			10/23/17 13:57	5

**Method: 6020 - Metals (ICP/MS) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.8		0.050	0.021	mg/L		10/16/17 12:49	10/18/17 22:21	5
Calcium	60		0.25	0.13	mg/L		10/16/17 12:49	10/18/17 22:21	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	450		5.0	3.4	mg/L			10/19/17 13:14	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-144550-24**

**Date Collected: 10/12/17 11:10**

**Matrix: Water**

**Date Received: 10/14/17 09:09**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.3		1.0	0.89	mg/L			10/21/17 20:39	1
Fluoride	0.36		0.20	0.082	mg/L			10/21/17 20:39	1
Sulfate	3.6		1.0	0.70	mg/L			10/21/17 20:39	1

**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		10/16/17 12:49	10/18/17 22:26	5
Calcium	9.5		0.25	0.13	mg/L		10/16/17 12:49	10/18/17 22:26	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	100		5.0	3.4	mg/L			10/19/17 13:14	1

# Client Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: DUP-2**

**Date Collected: 10/12/17 00:00**

**Date Received: 10/14/17 09:09**

**Lab Sample ID: 400-144550-25**

**Matrix: Water**

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.3		1.0	0.89	mg/L			10/21/17 21:01	1
Fluoride	0.38		0.20	0.082	mg/L			10/21/17 21:01	1
Sulfate	3.5		1.0	0.70	mg/L			10/21/17 21:01	1

## 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		10/16/17 12:49	10/18/17 22:30	5
Calcium	9.5		0.25	0.13	mg/L		10/16/17 12:49	10/18/17 22:30	5

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	66		5.0	3.4	mg/L			10/19/17 13:14	1

# Definitions/Glossary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

## Qualifiers

### HPLC/IC

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.

### 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.

### 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 Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

## Client Sample ID: WGWA-1

Date Collected: 10/10/17 10:10

Date Received: 10/12/17 08:31

## Lab Sample ID: 400-144550-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372784	10/21/17 00:28	JAW	TAL PEN
Total Recoverable	Prep	3005A			371995	10/16/17 11:02	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372482	10/18/17 16:23	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	371972	10/16/17 13:07	RRC	TAL PEN

## Client Sample ID: WGWA-2

Date Collected: 10/10/17 10:50

Date Received: 10/12/17 08:31

## Lab Sample ID: 400-144550-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372784	10/21/17 00:51	JAW	TAL PEN
Total Recoverable	Prep	3005A			371995	10/16/17 11:02	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372482	10/18/17 16:28	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	371972	10/16/17 13:07	RRC	TAL PEN

## Client Sample ID: FB-1

Date Collected: 10/10/17 09:56

Date Received: 10/12/17 08:31

## Lab Sample ID: 400-144550-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372784	10/21/17 01:14	JAW	TAL PEN
Total Recoverable	Prep	3005A			371995	10/16/17 11:02	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372482	10/18/17 16:32	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	371972	10/16/17 13:07	RRC	TAL PEN

## Client Sample ID: FERB-1

Date Collected: 10/10/17 10:30

Date Received: 10/12/17 08:31

## Lab Sample ID: 400-144550-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372784	10/21/17 01:59	JAW	TAL PEN
Total Recoverable	Prep	3005A			371995	10/16/17 11:02	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372482	10/18/17 16:37	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	371972	10/16/17 13:07	RRC	TAL PEN

## Client Sample ID: WGWA-18

Date Collected: 10/11/17 11:10

Date Received: 10/13/17 08:31

## Lab Sample ID: 400-144550-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372630	10/20/17 08:06	JAW	TAL PEN
Total Recoverable	Prep	3005A			371995	10/16/17 11:02	DN1	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-18**

**Date Collected: 10/11/17 11:10**

**Date Received: 10/13/17 08:31**

**Lab Sample ID: 400-144550-5**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020		5	372482	10/18/17 16:41	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372342	10/18/17 13:07	TET	TAL PEN

**Client Sample ID: WGWA-7**

**Date Collected: 10/11/17 10:00**

**Date Received: 10/13/17 08:31**

**Lab Sample ID: 400-144550-6**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372630	10/20/17 08:29	JAW	TAL PEN
Total Recoverable	Prep	3005A			371995	10/16/17 11:02	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372482	10/18/17 17:08	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372342	10/18/17 13:07	TET	TAL PEN

**Client Sample ID: WGWA-4**

**Date Collected: 10/11/17 10:45**

**Date Received: 10/13/17 08:31**

**Lab Sample ID: 400-144550-7**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372630	10/20/17 09:38	JAW	TAL PEN
Total Recoverable	Prep	3005A			371995	10/16/17 11:02	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372482	10/18/17 17:15	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372342	10/18/17 13:07	TET	TAL PEN

**Client Sample ID: FERB-2**

**Date Collected: 10/11/17 10:15**

**Date Received: 10/13/17 08:31**

**Lab Sample ID: 400-144550-8**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372630	10/20/17 10:00	JAW	TAL PEN
Total Recoverable	Prep	3005A			371995	10/16/17 11:02	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372482	10/18/17 17:20	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372342	10/18/17 13:07	TET	TAL PEN

**Client Sample ID: WGWA-5**

**Date Collected: 10/11/17 10:40**

**Date Received: 10/13/17 08:31**

**Lab Sample ID: 400-144550-9**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372630	10/20/17 10:23	JAW	TAL PEN
Total Recoverable	Prep	3005A			371995	10/16/17 11:02	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372482	10/18/17 17:24	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372342	10/18/17 13:07	TET	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWA-6**

**Lab Sample ID: 400-144550-10**

**Date Collected: 10/11/17 11:35**

**Matrix: Water**

**Date Received: 10/13/17 08:31**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372630	10/20/17 10:46	JAW	TAL PEN
Total Recoverable	Prep	3005A			371995	10/16/17 11:02	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372482	10/18/17 17:29	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372342	10/18/17 13:07	TET	TAL PEN

**Client Sample ID: WGWA-3**

**Lab Sample ID: 400-144550-11**

**Date Collected: 10/11/17 09:45**

**Matrix: Water**

**Date Received: 10/13/17 08:31**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372630	10/20/17 11:09	JAW	TAL PEN
Total Recoverable	Prep	3005A			371995	10/16/17 11:02	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372482	10/18/17 17:33	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372342	10/18/17 13:07	TET	TAL PEN

**Client Sample ID: WGWC-17**

**Lab Sample ID: 400-144550-12**

**Date Collected: 10/11/17 12:50**

**Matrix: Water**

**Date Received: 10/13/17 08:31**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372630	10/20/17 11:54	JAW	TAL PEN
Total Recoverable	Prep	3005A			372027	10/16/17 12:49	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372482	10/18/17 20:51	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372342	10/18/17 13:07	TET	TAL PEN

**Client Sample ID: WGWC-16**

**Lab Sample ID: 400-144550-13**

**Date Collected: 10/11/17 10:16**

**Matrix: Water**

**Date Received: 10/13/17 08:31**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10	372630	10/20/17 12:17	JAW	TAL PEN
Total/NA	Analysis	300.0		20	372784	10/20/17 23:42	JAW	TAL PEN
Total Recoverable	Prep	3005A	DL		372027	10/16/17 12:49	DN1	TAL PEN
Total Recoverable	Analysis	6020	DL	50	372482	10/18/17 21:14	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372342	10/18/17 13:07	TET	TAL PEN

**Client Sample ID: DUP-1**

**Lab Sample ID: 400-144550-14**

**Date Collected: 10/11/17 00:00**

**Matrix: Water**

**Date Received: 10/13/17 08:31**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372630	10/20/17 12:40	JAW	TAL PEN

TestAmerica Pensacola



# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: DUP-1**

**Lab Sample ID: 400-144550-14**

**Date Collected: 10/11/17 00:00**

**Matrix: Water**

**Date Received: 10/13/17 08:31**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20	372784	10/21/17 00:05	JAW	TAL PEN
Total Recoverable	Prep	3005A	DL		372027	10/16/17 12:49	DN1	TAL PEN
Total Recoverable	Analysis	6020	DL	50	372643	10/19/17 12:40	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372342	10/18/17 13:07	TET	TAL PEN

**Client Sample ID: WGWC-14A**

**Lab Sample ID: 400-144550-15**

**Date Collected: 10/11/17 13:15**

**Matrix: Water**

**Date Received: 10/13/17 08:31**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372630	10/20/17 13:03	JAW	TAL PEN
Total Recoverable	Prep	3005A			372027	10/16/17 12:49	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 12:30	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372343	10/18/17 13:49	TET	TAL PEN

**Client Sample ID: WGWC-15**

**Lab Sample ID: 400-144550-16**

**Date Collected: 10/11/17 13:05**

**Matrix: Water**

**Date Received: 10/13/17 08:31**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372630	10/20/17 14:11	JAW	TAL PEN
Total/NA	Analysis	300.0		20	372784	10/21/17 04:16	JAW	TAL PEN
Total Recoverable	Prep	3005A			372027	10/16/17 12:49	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372482	10/18/17 21:50	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372343	10/18/17 13:49	TET	TAL PEN

**Client Sample ID: WGWC-13**

**Lab Sample ID: 400-144550-17**

**Date Collected: 10/12/17 09:20**

**Matrix: Water**

**Date Received: 10/14/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372791	10/21/17 16:28	JAW	TAL PEN
Total Recoverable	Prep	3005A			372027	10/16/17 12:49	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372482	10/18/17 21:54	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372515	10/19/17 13:14	TET	TAL PEN

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-144550-18**

**Date Collected: 10/12/17 10:06**

**Matrix: Water**

**Date Received: 10/14/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372791	10/21/17 17:36	JAW	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-11**

**Lab Sample ID: 400-144550-18**

**Date Collected: 10/12/17 10:06**

**Matrix: Water**

**Date Received: 10/14/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			372027	10/16/17 12:49	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372482	10/18/17 21:59	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372515	10/19/17 13:14	TET	TAL PEN

**Client Sample ID: WGWC-12**

**Lab Sample ID: 400-144550-19**

**Date Collected: 10/12/17 10:57**

**Matrix: Water**

**Date Received: 10/14/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372791	10/21/17 17:59	JAW	TAL PEN
Total Recoverable	Prep	3005A			372027	10/16/17 12:49	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372482	10/18/17 22:03	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372515	10/19/17 13:14	TET	TAL PEN

**Client Sample ID: FB-2**

**Lab Sample ID: 400-144550-20**

**Date Collected: 10/12/17 10:20**

**Matrix: Water**

**Date Received: 10/14/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372791	10/21/17 18:22	JAW	TAL PEN
Total Recoverable	Prep	3005A			372027	10/16/17 12:49	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372482	10/18/17 22:08	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372515	10/19/17 13:14	TET	TAL PEN

**Client Sample ID: WGWC-10**

**Lab Sample ID: 400-144550-21**

**Date Collected: 10/12/17 10:30**

**Matrix: Water**

**Date Received: 10/14/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372851	10/22/17 09:12	JAW	TAL PEN
Total Recoverable	Prep	3005A			372027	10/16/17 12:49	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372482	10/18/17 22:12	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372515	10/19/17 13:14	TET	TAL PEN

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-144550-22**

**Date Collected: 10/12/17 11:50**

**Matrix: Water**

**Date Received: 10/14/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372791	10/21/17 19:53	JAW	TAL PEN
Total Recoverable	Prep	3005A			372027	10/16/17 12:49	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372482	10/18/17 22:17	DRE	TAL PEN

TestAmerica Pensacola

# Lab Chronicle

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

**Client Sample ID: WGWC-9**

**Lab Sample ID: 400-144550-22**

**Date Collected: 10/12/17 11:50**

**Matrix: Water**

**Date Received: 10/14/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	372515	10/19/17 13:14	TET	TAL PEN

**Client Sample ID: WGWC-8**

**Lab Sample ID: 400-144550-23**

**Date Collected: 10/12/17 10:07**

**Matrix: Water**

**Date Received: 10/14/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372791	10/21/17 20:16	JAW	TAL PEN
Total/NA	Analysis	300.0		5	372924	10/23/17 13:57	JAW	TAL PEN
Total Recoverable	Prep	3005A			372027	10/16/17 12:49	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372482	10/18/17 22:21	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372515	10/19/17 13:14	TET	TAL PEN

**Client Sample ID: WGWC-19**

**Lab Sample ID: 400-144550-24**

**Date Collected: 10/12/17 11:10**

**Matrix: Water**

**Date Received: 10/14/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372791	10/21/17 20:39	JAW	TAL PEN
Total Recoverable	Prep	3005A			372027	10/16/17 12:49	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372482	10/18/17 22:26	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372515	10/19/17 13:14	TET	TAL PEN

**Client Sample ID: DUP-2**

**Lab Sample ID: 400-144550-25**

**Date Collected: 10/12/17 00:00**

**Matrix: Water**

**Date Received: 10/14/17 09:09**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	372791	10/21/17 21:01	JAW	TAL PEN
Total Recoverable	Prep	3005A			372027	10/16/17 12:49	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372482	10/18/17 22:30	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372515	10/19/17 13:14	TET	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 Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

## HPLC/IC

### Analysis Batch: 372630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144550-5	WGWA-18	Total/NA	Water	300.0	
400-144550-6	WGWA-7	Total/NA	Water	300.0	
400-144550-7	WGWA-4	Total/NA	Water	300.0	
400-144550-8	FERB-2	Total/NA	Water	300.0	
400-144550-9	WGWA-5	Total/NA	Water	300.0	
400-144550-10	WGWA-6	Total/NA	Water	300.0	
400-144550-11	WGWA-3	Total/NA	Water	300.0	
400-144550-12	WGWA-17	Total/NA	Water	300.0	
400-144550-13	WGWC-16	Total/NA	Water	300.0	
400-144550-14	DUP-1	Total/NA	Water	300.0	
400-144550-15	WGWC-14A	Total/NA	Water	300.0	
400-144550-16	WGWC-15	Total/NA	Water	300.0	
MB 400-372630/4	Method Blank	Total/NA	Water	300.0	
LCS 400-372630/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-372630/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-144533-A-8 MS	Matrix Spike	Total/NA	Water	300.0	
400-144533-A-8 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 372784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144550-1	WGWA-1	Total/NA	Water	300.0	
400-144550-2	WGWA-2	Total/NA	Water	300.0	
400-144550-3	FB-1	Total/NA	Water	300.0	
400-144550-4	FERB-1	Total/NA	Water	300.0	
400-144550-13	WGWC-16	Total/NA	Water	300.0	
400-144550-14	DUP-1	Total/NA	Water	300.0	
400-144550-16	WGWC-15	Total/NA	Water	300.0	
MB 400-372784/40	Method Blank	Total/NA	Water	300.0	
LCS 400-372784/41	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-372784/42	Lab Control Sample Dup	Total/NA	Water	300.0	
400-144533-A-3 MS	Matrix Spike	Total/NA	Water	300.0	
400-144533-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 372791

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144550-17	WGWC-13	Total/NA	Water	300.0	
400-144550-18	WGWC-11	Total/NA	Water	300.0	
400-144550-19	WGWC-12	Total/NA	Water	300.0	
400-144550-20	FB-2	Total/NA	Water	300.0	
400-144550-22	WGWC-9	Total/NA	Water	300.0	
400-144550-23	WGWC-8	Total/NA	Water	300.0	
400-144550-24	WGWC-19	Total/NA	Water	300.0	
400-144550-25	DUP-2	Total/NA	Water	300.0	
MB 400-372791/4	Method Blank	Total/NA	Water	300.0	
LCS 400-372791/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-372791/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-144550-17 MS	WGWC-13	Total/NA	Water	300.0	
400-144550-17 MSD	WGWC-13	Total/NA	Water	300.0	

# QC Association Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

## HPLC/IC (Continued)

### Analysis Batch: 372851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144550-21	WGWC-10	Total/NA	Water	300.0	
MB 400-372851/36	Method Blank	Total/NA	Water	300.0	
LCS 400-372851/37	Lab Control Sample	Total/NA	Water	300.0	
LCS D 400-372851/38	Lab Control Sample Dup	Total/NA	Water	300.0	
400-144551-A-12 MS	Matrix Spike	Total/NA	Water	300.0	
400-144551-A-12 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 372924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144550-23	WGWC-8	Total/NA	Water	300.0	
MB 400-372924/4	Method Blank	Total/NA	Water	300.0	
LCS 400-372924/5	Lab Control Sample	Total/NA	Water	300.0	
LCS D 400-372924/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-144551-A-31 MS	Matrix Spike	Total/NA	Water	300.0	
400-144551-A-31 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

## Metals

### Prep Batch: 371995

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144550-1	WGWA-1	Total Recoverable	Water	3005A	
400-144550-2	WGWA-2	Total Recoverable	Water	3005A	
400-144550-3	FB-1	Total Recoverable	Water	3005A	
400-144550-4	FERB-1	Total Recoverable	Water	3005A	
400-144550-5	WGWA-18	Total Recoverable	Water	3005A	
400-144550-6	WGWA-7	Total Recoverable	Water	3005A	
400-144550-7	WGWA-4	Total Recoverable	Water	3005A	
400-144550-8	FERB-2	Total Recoverable	Water	3005A	
400-144550-9	WGWA-5	Total Recoverable	Water	3005A	
400-144550-10	WGWA-6	Total Recoverable	Water	3005A	
400-144550-11	WGWA-3	Total Recoverable	Water	3005A	
MB 400-371995/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-371995/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-144652-J-1-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-144652-J-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Prep Batch: 372027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144550-12	WGWC-17	Total Recoverable	Water	3005A	
400-144550-13 - DL	WGWC-16	Total Recoverable	Water	3005A	
400-144550-14 - DL	DUP-1	Total Recoverable	Water	3005A	
400-144550-15	WGWC-14A	Total Recoverable	Water	3005A	
400-144550-16	WGWC-15	Total Recoverable	Water	3005A	
400-144550-17	WGWC-13	Total Recoverable	Water	3005A	
400-144550-18	WGWC-11	Total Recoverable	Water	3005A	
400-144550-19	WGWC-12	Total Recoverable	Water	3005A	
400-144550-20	FB-2	Total Recoverable	Water	3005A	
400-144550-21	WGWC-10	Total Recoverable	Water	3005A	
400-144550-22	WGWC-9	Total Recoverable	Water	3005A	
400-144550-23	WGWC-8	Total Recoverable	Water	3005A	

TestAmerica Pensacola

# QC Association Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

## Metals (Continued)

### Prep Batch: 372027 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144550-24	WGWC-19	Total Recoverable	Water	3005A	
400-144550-25	DUP-2	Total Recoverable	Water	3005A	
MB 400-372027/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-372027/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-144550-12 MS	WGWC-17	Total Recoverable	Water	3005A	
400-144550-12 MSD	WGWC-17	Total Recoverable	Water	3005A	

### Analysis Batch: 372482

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144550-1	WGWA-1	Total Recoverable	Water	6020	371995
400-144550-2	WGWA-2	Total Recoverable	Water	6020	371995
400-144550-3	FB-1	Total Recoverable	Water	6020	371995
400-144550-4	FERB-1	Total Recoverable	Water	6020	371995
400-144550-5	WGWA-18	Total Recoverable	Water	6020	371995
400-144550-6	WGWA-7	Total Recoverable	Water	6020	371995
400-144550-7	WGWA-4	Total Recoverable	Water	6020	371995
400-144550-8	FERB-2	Total Recoverable	Water	6020	371995
400-144550-9	WGWA-5	Total Recoverable	Water	6020	371995
400-144550-10	WGWA-6	Total Recoverable	Water	6020	371995
400-144550-11	WGWA-3	Total Recoverable	Water	6020	371995
400-144550-12	WGWC-17	Total Recoverable	Water	6020	372027
400-144550-13 - DL	WGWC-16	Total Recoverable	Water	6020	372027
400-144550-16	WGWC-15	Total Recoverable	Water	6020	372027
400-144550-17	WGWC-13	Total Recoverable	Water	6020	372027
400-144550-18	WGWC-11	Total Recoverable	Water	6020	372027
400-144550-19	WGWC-12	Total Recoverable	Water	6020	372027
400-144550-20	FB-2	Total Recoverable	Water	6020	372027
400-144550-21	WGWC-10	Total Recoverable	Water	6020	372027
400-144550-22	WGWC-9	Total Recoverable	Water	6020	372027
400-144550-23	WGWC-8	Total Recoverable	Water	6020	372027
400-144550-24	WGWC-19	Total Recoverable	Water	6020	372027
400-144550-25	DUP-2	Total Recoverable	Water	6020	372027
MB 400-371995/1-A ^5	Method Blank	Total Recoverable	Water	6020	371995
MB 400-372027/1-A ^5	Method Blank	Total Recoverable	Water	6020	372027
LCS 400-371995/2-A	Lab Control Sample	Total Recoverable	Water	6020	371995
LCS 400-372027/2-A	Lab Control Sample	Total Recoverable	Water	6020	372027
400-144550-12 MS	WGWC-17	Total Recoverable	Water	6020	372027
400-144550-12 MSD	WGWC-17	Total Recoverable	Water	6020	372027
400-144652-J-1-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	371995
400-144652-J-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	371995

### Analysis Batch: 372643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144550-14 - DL	DUP-1	Total Recoverable	Water	6020	372027
400-144550-15	WGWC-14A	Total Recoverable	Water	6020	372027

# QC Association Summary

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

## General Chemistry

### Analysis Batch: 371972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144550-1	WGWA-1	Total/NA	Water	SM 2540C	
400-144550-2	WGWA-2	Total/NA	Water	SM 2540C	
400-144550-3	FB-1	Total/NA	Water	SM 2540C	
400-144550-4	FERB-1	Total/NA	Water	SM 2540C	
MB 400-371972/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-371972/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-144530-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	

### Analysis Batch: 372342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144550-5	WGWA-18	Total/NA	Water	SM 2540C	
400-144550-6	WGWA-7	Total/NA	Water	SM 2540C	
400-144550-7	WGWA-4	Total/NA	Water	SM 2540C	
400-144550-8	FERB-2	Total/NA	Water	SM 2540C	
400-144550-9	WGWA-5	Total/NA	Water	SM 2540C	
400-144550-10	WGWA-6	Total/NA	Water	SM 2540C	
400-144550-11	WGWA-3	Total/NA	Water	SM 2540C	
400-144550-12	WGWC-17	Total/NA	Water	SM 2540C	
400-144550-13	WGWC-16	Total/NA	Water	SM 2540C	
400-144550-14	DUP-1	Total/NA	Water	SM 2540C	
MB 400-372342/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-372342/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-144550-5 DU	WGWA-18	Total/NA	Water	SM 2540C	

### Analysis Batch: 372343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144550-15	WGWC-14A	Total/NA	Water	SM 2540C	
400-144550-16	WGWC-15	Total/NA	Water	SM 2540C	
MB 400-372343/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-372343/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-144550-15 DU	WGWC-14A	Total/NA	Water	SM 2540C	

### Analysis Batch: 372515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144550-17	WGWC-13	Total/NA	Water	SM 2540C	
400-144550-18	WGWC-11	Total/NA	Water	SM 2540C	
400-144550-19	WGWC-12	Total/NA	Water	SM 2540C	
400-144550-20	FB-2	Total/NA	Water	SM 2540C	
400-144550-21	WGWC-10	Total/NA	Water	SM 2540C	
400-144550-22	WGWC-9	Total/NA	Water	SM 2540C	
400-144550-23	WGWC-8	Total/NA	Water	SM 2540C	
400-144550-24	WGWC-19	Total/NA	Water	SM 2540C	
400-144550-25	DUP-2	Total/NA	Water	SM 2540C	
MB 400-372515/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-372515/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-144530-A-11 DU	Duplicate	Total/NA	Water	SM 2540C	
400-144551-A-20 DU	Duplicate	Total/NA	Water	SM 2540C	

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 400-372630/4**  
**Matrix: Water**  
**Analysis Batch: 372630**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/20/17 05:04	1
Fluoride	<0.082		0.20	0.082	mg/L			10/20/17 05:04	1
Sulfate	<0.70		1.0	0.70	mg/L			10/20/17 05:04	1

**Lab Sample ID: LCS 400-372630/5**  
**Matrix: Water**  
**Analysis Batch: 372630**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.1		mg/L		101	90 - 110
Fluoride	10.0	10.5		mg/L		105	90 - 110
Sulfate	10.0	10.7		mg/L		107	90 - 110

**Lab Sample ID: LCSD 400-372630/6**  
**Matrix: Water**  
**Analysis Batch: 372630**

**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	10.0	10.1		mg/L		101	90 - 110	0	15
Fluoride	10.0	10.7		mg/L		107	90 - 110	2	15
Sulfate	10.0	10.8		mg/L		108	90 - 110	0	15

**Lab Sample ID: 400-144533-A-8 MS**  
**Matrix: Water**  
**Analysis Batch: 372630**

**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	89	E	10.0	96.3	E 4	mg/L		76	80 - 120
Fluoride	<0.082		10.0	10.7		mg/L		107	80 - 120
Sulfate	15		10.0	25.9		mg/L		111	80 - 120

**Lab Sample ID: 400-144533-A-8 MSD**  
**Matrix: Water**  
**Analysis Batch: 372630**

**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	89	E	10.0	96.3	E 4	mg/L		77	80 - 120	0	20
Fluoride	<0.082		10.0	10.9		mg/L		109	80 - 120	1	20
Sulfate	15		10.0	25.9		mg/L		111	80 - 120	0	20

**Lab Sample ID: MB 400-372784/40**  
**Matrix: Water**  
**Analysis Batch: 372784**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/20/17 18:46	1
Fluoride	<0.082		0.20	0.082	mg/L			10/20/17 18:46	1
Sulfate	<0.70		1.0	0.70	mg/L			10/20/17 18:46	1

TestAmerica Pensacola



# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 400-372784/41**  
**Matrix: Water**  
**Analysis Batch: 372784**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.2		mg/L		102	90 - 110
Fluoride	10.0	10.5		mg/L		105	90 - 110
Sulfate	10.0	10.9		mg/L		109	90 - 110

**Lab Sample ID: LCSD 400-372784/42**  
**Matrix: Water**  
**Analysis Batch: 372784**

**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	10.0	10.1		mg/L		101	90 - 110	1	15
Fluoride	10.0	10.6		mg/L		106	90 - 110	1	15
Sulfate	10.0	10.7		mg/L		107	90 - 110	2	15

**Lab Sample ID: 400-144533-A-3 MS**  
**Matrix: Water**  
**Analysis Batch: 372784**

**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	98		50.0	146		mg/L		96	80 - 120
Fluoride	<0.41		50.0	52.1		mg/L		104	80 - 120
Sulfate	15		50.0	70.8		mg/L		112	80 - 120

**Lab Sample ID: 400-144533-A-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 372784**

**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	98		50.0	145		mg/L		95	80 - 120	0	20
Fluoride	<0.41		50.0	52.9		mg/L		106	80 - 120	1	20
Sulfate	15		50.0	70.6		mg/L		111	80 - 120	0	20

**Lab Sample ID: MB 400-372791/4**  
**Matrix: Water**  
**Analysis Batch: 372791**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/21/17 15:19	1
Fluoride	<0.082		0.20	0.082	mg/L			10/21/17 15:19	1
Sulfate	<0.70		1.0	0.70	mg/L			10/21/17 15:19	1

**Lab Sample ID: LCS 400-372791/5**  
**Matrix: Water**  
**Analysis Batch: 372791**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.1		mg/L		101	90 - 110
Fluoride	10.0	10.6		mg/L		106	90 - 110
Sulfate	10.0	10.8		mg/L		108	90 - 110

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCSD 400-372791/6**  
**Matrix: Water**  
**Analysis Batch: 372791**

**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	10.0	10.1		mg/L		101	90 - 110	0	15
Fluoride	10.0	10.4		mg/L		104	90 - 110	2	15
Sulfate	10.0	10.9		mg/L		109	90 - 110	1	15

**Lab Sample ID: 400-144550-17 MS**  
**Matrix: Water**  
**Analysis Batch: 372791**

**Client Sample ID: WGWC-13**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.2		10.0	10.9		mg/L		97	80 - 120
Fluoride	0.28		10.0	10.9		mg/L		106	80 - 120
Sulfate	6.1		10.0	17.3		mg/L		112	80 - 120

**Lab Sample ID: 400-144550-17 MSD**  
**Matrix: Water**  
**Analysis Batch: 372791**

**Client Sample ID: WGWC-13**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1.2		10.0	10.9		mg/L		97	80 - 120	0	20
Fluoride	0.28		10.0	10.7		mg/L		104	80 - 120	2	20
Sulfate	6.1		10.0	17.3		mg/L		112	80 - 120	0	20

**Lab Sample ID: MB 400-372851/36**  
**Matrix: Water**  
**Analysis Batch: 372851**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/22/17 03:30	1
Fluoride	<0.082		0.20	0.082	mg/L			10/22/17 03:30	1
Sulfate	<0.70		1.0	0.70	mg/L			10/22/17 03:30	1

**Lab Sample ID: LCS 400-372851/37**  
**Matrix: Water**  
**Analysis Batch: 372851**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.1		mg/L		101	90 - 110
Fluoride	10.0	10.6		mg/L		106	90 - 110
Sulfate	10.0	10.8		mg/L		108	90 - 110

**Lab Sample ID: LCSD 400-372851/38**  
**Matrix: Water**  
**Analysis Batch: 372851**

**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	10.0	10.0		mg/L		100	90 - 110	1	15
Fluoride	10.0	10.6		mg/L		106	90 - 110	0	15
Sulfate	10.0	10.8		mg/L		108	90 - 110	1	15

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 400-144551-A-12 MS**  
**Matrix: Water**  
**Analysis Batch: 372851**

**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	<0.89		10.0	9.22		mg/L		92	80 - 120
Fluoride	<0.082		10.0	10.5		mg/L		105	80 - 120
Sulfate	<0.70		10.0	10.6		mg/L		106	80 - 120

**Lab Sample ID: 400-144551-A-12 MSD**  
**Matrix: Water**  
**Analysis Batch: 372851**

**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	<0.89		10.0	9.21		mg/L		92	80 - 120	0	20
Fluoride	<0.082		10.0	10.5		mg/L		105	80 - 120	0	20
Sulfate	<0.70		10.0	10.6		mg/L		106	80 - 120	0	20

**Lab Sample ID: MB 400-372924/4**  
**Matrix: Water**  
**Analysis Batch: 372924**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.89		1.0	0.89	mg/L			10/23/17 10:31	1
Fluoride	<0.082		0.20	0.082	mg/L			10/23/17 10:31	1
Sulfate	<0.70		1.0	0.70	mg/L			10/23/17 10:31	1

**Lab Sample ID: LCS 400-372924/5**  
**Matrix: Water**  
**Analysis Batch: 372924**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.98		mg/L		100	90 - 110
Fluoride	10.0	10.5		mg/L		105	90 - 110
Sulfate	10.0	10.7		mg/L		107	90 - 110

**Lab Sample ID: LCSD 400-372924/6**  
**Matrix: Water**  
**Analysis Batch: 372924**

**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	10.0	10.1		mg/L		101	90 - 110	1	15
Fluoride	10.0	10.4		mg/L		104	90 - 110	1	15
Sulfate	10.0	10.8		mg/L		108	90 - 110	1	15

**Lab Sample ID: 400-144551-A-31 MS**  
**Matrix: Water**  
**Analysis Batch: 372924**

**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	11		10.0	20.0		mg/L		93	80 - 120
Fluoride	<0.082		10.0	10.7		mg/L		107	80 - 120
Sulfate	300	E	10.0	314	E 4	mg/L		143	80 - 120

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 400-144551-A-31 MSD**  
**Matrix: Water**  
**Analysis Batch: 372924**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Chloride	11		10.0	20.1		mg/L		94	80 - 120	1	20
Fluoride	<0.082		10.0	10.6		mg/L		106	80 - 120	1	20
Sulfate	300	E	10.0	317	E 4	mg/L		173	80 - 120	1	20

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 400-371995/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 372482**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 371995**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Boron	<0.021		0.050	0.021	mg/L		10/16/17 11:02	10/18/17 14:53	5
Calcium	<0.13		0.25	0.13	mg/L		10/16/17 11:02	10/18/17 14:53	5

**Lab Sample ID: LCS 400-371995/2-A**  
**Matrix: Water**  
**Analysis Batch: 372482**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 371995**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
		Added	Result				Qualifier
Boron	0.100	0.101		mg/L		101	80 - 120
Calcium	5.00	5.23		mg/L		105	80 - 120

**Lab Sample ID: 400-144652-J-1-B MS ^5**  
**Matrix: Water**  
**Analysis Batch: 372482**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 371995**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier		Result	Qualifier				Limits
Boron	0.074		0.100	0.182		mg/L		107	75 - 125
Calcium	50		5.00	54.7	4	mg/L		100	75 - 125

**Lab Sample ID: 400-144652-J-1-C MSD ^5**  
**Matrix: Water**  
**Analysis Batch: 372482**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 371995**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Boron	0.074		0.100	0.179		mg/L		104	75 - 125	2	20
Calcium	50		5.00	53.6	4	mg/L		78	75 - 125	2	20

**Lab Sample ID: MB 400-372027/1-A ^5**  
**Matrix: Water**  
**Analysis Batch: 372482**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 372027**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Boron	<0.021		0.050	0.021	mg/L		10/16/17 12:49	10/18/17 20:38	5
Calcium	<0.13		0.25	0.13	mg/L		10/16/17 12:49	10/18/17 20:38	5

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 400-372027/2-A**  
**Matrix: Water**  
**Analysis Batch: 372482**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 372027**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Boron	0.100	0.100		mg/L		100	80 - 120
Calcium	5.00	5.19		mg/L		104	80 - 120

**Lab Sample ID: 400-144550-12 MS**  
**Matrix: Water**  
**Analysis Batch: 372482**

**Client Sample ID: WGWC-17**  
**Prep Type: Total Recoverable**  
**Prep Batch: 372027**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Boron	<0.021		0.100	0.120		mg/L		120	75 - 125
Calcium	10		5.00	15.4		mg/L		106	75 - 125

**Lab Sample ID: 400-144550-12 MSD**  
**Matrix: Water**  
**Analysis Batch: 372482**

**Client Sample ID: WGWC-17**  
**Prep Type: Total Recoverable**  
**Prep Batch: 372027**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Boron	<0.021		0.100	0.113		mg/L		113	75 - 125	6	20
Calcium	10		5.00	15.5		mg/L		108	75 - 125	1	20

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 400-371972/1**  
**Matrix: Water**  
**Analysis Batch: 371972**

**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			10/16/17 13:07	1

**Lab Sample ID: LCS 400-371972/2**  
**Matrix: Water**  
**Analysis Batch: 371972**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	293	264		mg/L		90	78 - 122

**Lab Sample ID: 400-144530-A-1 DU**  
**Matrix: Water**  
**Analysis Batch: 371972**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	300		304		mg/L		0	5

**Lab Sample ID: MB 400-372342/1**  
**Matrix: Water**  
**Analysis Batch: 372342**

**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			10/18/17 13:07	1

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
SDG: Plant Wansley Ash Pond

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: LCS 400-372342/2**  
**Matrix: Water**  
**Analysis Batch: 372342**

**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: 400-144550-5 DU**  
**Matrix: Water**  
**Analysis Batch: 372342**

**Client Sample ID: WGWA-18**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	90		90.0		mg/L		0	5

**Lab Sample ID: MB 400-372343/1**  
**Matrix: Water**  
**Analysis Batch: 372343**

**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			10/18/17 13:49	1

**Lab Sample ID: LCS 400-372343/2**  
**Matrix: Water**  
**Analysis Batch: 372343**

**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	284		mg/L		97	78 - 122

**Lab Sample ID: 400-144550-15 DU**  
**Matrix: Water**  
**Analysis Batch: 372343**

**Client Sample ID: WGWC-14A**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	68		66.0		mg/L		3	5

**Lab Sample ID: MB 400-372515/1**  
**Matrix: Water**  
**Analysis Batch: 372515**

**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			10/19/17 13:14	1

**Lab Sample ID: LCS 400-372515/2**  
**Matrix: Water**  
**Analysis Batch: 372515**

**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	282		mg/L		96	78 - 122

**Lab Sample ID: 400-144530-A-11 DU**  
**Matrix: Water**  
**Analysis Batch: 372515**

**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	46		46.0		mg/L		0	5

TestAmerica Pensacola

# QC Sample Results

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

**Lab Sample ID: 400-144551-A-20 DU**  
**Matrix: Water**  
**Analysis Batch: 372515**

**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	280		280		mg/L		0.7	5

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

5 McLemore Drive  
Tallahassee, FL 32314  
Phone (850) 474-1001 Fax (850) 478-2671

**Client Information**

Client Name: **Whitmore, Cheyenne R**  
 Lab PM: **Whitmore, Cheyenne R**  
 Phone: **cheyenne.whitmore@testamericainc.com**  
 E-Mail: **cheyenne.whitmore@testamericainc.com**

**Sampler:**

Lab PM: **Whitmore, Cheyenne R**  
 E-Mail: **cheyenne.whitmore@testamericainc.com**

**Lab PM:**

Whitmore, Cheyenne R  
 E-Mail: **cheyenne.whitmore@testamericainc.com**

**Camera Tracking No(s):**

400-144550 COC

**COC No.:**

400-144550 COC

**Page:**

1 of 5

**Job #:**

Plant Wansley - Ash Point

**Due Date Requested:**

TAT Requested (days):

**Field Filtered Sample (Yes or No)**

Yes

**Perform MS/MSD (Yes or No)**

Yes

**Analysis Requested**

TPS - SM 2540C : Cl, F, SO4 - EPA 300  
 Metals - (Part 257 Appendix III) EPA 6020; B & Ca

**Preservation Codes:**

A - HCL  
 B - NaOH  
 C - Zn Acetate  
 D - Nitric Acid  
 E - NaHSO4  
 F - MeOH  
 G - Amchlor  
 H - Ascorbic Acid  
 I - Ice  
 J - DI Water  
 K - EDTA  
 L - EDA  
 Other:

**Special Instructions/Note:**

Total Number of containers: 2

**Sample Identification**

Sample ID: GWA-1

Sample Date: 10.10.2017

Sample Time: 1010

Sample Type (C=comp, G=grab): G

Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air): W

Preservation Code: W

Field Filtered Sample:  Yes

Perform MS/MSD:  Yes

Analysis Requested: TAT Requested (days):

Due Date Requested:

Camera Tracking No(s):

Lab PM:

Page:

Job #:

Special Instructions/Note:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

**Special Instructions/QC Requirements:**

Empty Kit Relinquished by:

Relinquished by: *Johny Colles*

Relinquished by: *Johny Colles*

Relinquished by: *Johny Colles*

Custody Seals Intact:  Yes  No

Custody Seal No.:

Method of Shipment:

Date:

Time:

Received by:

Company:

Date/Time:

Received by:

Company:

Date/Time:

Received by:

Company:

Date/Time:

Cobalt temperature(s) °C and Other Remarks:

1.9 11.7

10/2/2017

10/11/17

1220

1600

10/11/17

10/11/17

10/11/17

10/11/17

10/11/17

10/11/17

10/11/17

10/11/17

10/11/17



**Chain of Custody Record**

Company: Southern Company  
 Address: 2411 Ralph McGill Blvd SE B10185  
 City: Atlanta  
 State: GA, Zip: 30308  
 Phone: 404-506-7239  
 Email: JAbraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

Client Information  
 Client Contact: Joju Abraham  
 Lab PM: Whitmire, Cheyenne R  
 E-Mail: cheyenne.whitmire@testamericainc.com

Sampler: Whitmire, Cheyenne R  
 Garmer Tracking No(s):  
 Due Date Requested:  
 TAT Requested (days):  
 PO #:  
 WO #:  
 Project #:  
 SSOW#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=soil, BT=Trace, A=Air)	Preservation Code:	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		TDS - SM 2540C; Cl, F, SO4 - EPA 300		Metals - (Part 257 Appendix III) EPA 6020; B & Ca		Analysis Requested	Total Number of Containers	Special Instructions/Note:
						Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TDS - SM 2540C; Cl, F, SO4 - EPA 300	Metals - (Part 257 Appendix III) EPA 6020; B & Ca							
WGWA-18	10.11.2017	1110	G	W		X	X	X	X					2		
WGWA-7	10.11.2017	1000	G	W		X	X	X	X					2		
WGWA-4	10.11.2017	1045	G	W		X	X	X	X					2		
FERB-2	10.11.2017	1015	G	W		X	X	X	X					2		
WGWA-5	10.11.2017	1040	G	W		X	X	X	X					2		
WGWA-6	10.11.2017	1135	G	W		X	X	X	X					2		
WGWA-3	10.11.2017	0945	G	W		X	X	X	X					2		
WGW-17	10.11.2017	1250	G	W		X	X	X	X					2		
WGW-16	10.11.2017	1016	G	W		X	X	X	X					2		
DUP-1	10.11.2017	--	G	W		X	X	X	X					2		
WGW-14A	10.11.2017	1315	G	W		X	X	X	X					2		
WGW-15	10.11.2017	1305	G	W		X	X	X	X					2		

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological

**Deliverable Requested:** I, II, III, IV, Other (specify)

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

**Empty Kit Relinquished by:** \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

**Relinquished by:** *Erin M* Date: 10/12/2017 Time: 1205 Company: ERM

**Relinquished by:** *Sto* Date: 10/12/17 Time: 1600 Company: \_\_\_\_\_

**Relinquished by:** \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Company: \_\_\_\_\_

**Received by:** \_\_\_\_\_ Date: 10/12/17 Time: 1205 Company: \_\_\_\_\_

**Received by:** \_\_\_\_\_ Date: 10.13.17 Time: 0831 Company: TA

**Received by:** \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Company: \_\_\_\_\_

**Custody Seal No.:** \_\_\_\_\_

**Custody Seals Intact:**  Yes  No

**Cooler Temperature(s) °C and Other Remarks:** 0.0C / 0.0C IR 7 TP





# Chain of Custody Record

**TestAmerica Pensacola**  
355 McLemore Drive  
Pensacola, FL 32514  
Phone (850) 474-1001 Fax (850) 478-2671

**Client Information**  
 Lab PM: Whitmire, Cheyenne R  
 Carrier Tracking No(s):  
 400-144550 COC  
 Client Contact: loju Abraham  
 E-Mail: cheyenne.whitmire@testamericainc.com  
 Southern Company  
 Address: 141 Ralph McGill Blvd SE B10185  
 Atlanta, GA, 30308  
 Phone: 104-506-7239  
 Email: loju.abraham@southernco.com  
 Project Name: Plant Wansley - Ash Pond  
 Site: CCR

**Analysis Requested**

Sample ID	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastefoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	TDS - SM 2540C ; Cl, F, SO4 - EPA 300	Metals - (Part 257 Appendix III) EPA 6020; B & Ca	Total Number of containers	Special Instructions/Note:
NGWC-13	10.12.2017	0920	G	W	X	X	X	2	
NGWC-11	10.12.2017	1006	G	W	X	X	X	2	
NGWC-12	10.12.2017	1057	G	W	X	X	X	2	
NGWC-10	10.12.2017	1020	G	W	X	X	X	2	
NGWC-9	10.12.2017	1030	G	W	X	X	X	2	
NGWC-8	10.12.2017	1150	G	W	X	X	X	2	
NGWC-19	10.12.2017	1007	G	W	X	X	X	2	
JUP-2	10.12.2017	1110	G	W	X	X	X	2	
JUP-2	10.12.2017	--	G	W	X	X	X	2	

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

**Special Instructions/QC Requirements:**

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Method of Shipment: \_\_\_\_\_

Relinquished by: *Anthony Ellis* Date/Time: 10-13-2017 / 12-16 Company: FRM  
 Relinquished by: *DOC* Date/Time: 10-13-17 1220 Company: Company  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: Company

Cooler Temperature(s) °C and Other Remarks: 2.9°C JRS

## Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-144550-1  
SDG Number: Plant Wansley Ash Pond

**Login Number: 144550**

**List Number: 1**

**Creator: Johnson, Jeremy N**

**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	1.9°C, 0.0°C, 0.0°C IR-7; 2.9°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?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# Accreditation/Certification Summary

Client: Southern Company  
 Project/Site: CCR - Plant Wansley

TestAmerica Job ID: 400-144550-1  
 SDG: Plant Wansley Ash Pond

## 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	10-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-18
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-17-12	09-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18



Product Name: Low-Flow System

Date: 2016-05-17 11:34:31

Project Information:

Operator Name cg/Kj/bh/tm  
Company Name Golder  
Project Name Wansley CCR  
Site Name Wansley  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 418098  
Turbidity Make/Model Lamottes

Pump Information:

Pump Model/Type sample pro  
Tubing Type polyethylene  
Tubing Diameter .125 in  
Tubing Length 125 ft

Pump placement from TOC 125 ft

Well Information:

Well ID WGWA1  
Well diameter 2 in  
Well Total Depth 130.59 ft  
Screen Length 10 ft  
Depth to Water 25.32 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.5166478 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 4.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 0	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 0
Stabilization									
Last 5	11:12:21	1800.28	18.35	5.22	34.26	0.40	25.33	2.43	222.36
Last 5	11:17:21	2100.29	18.49	5.22	34.60	0.14	25.33	2.35	220.32
Last 5	11:22:21	2400.28	19.06	5.26	34.72	0.23	25.33	2.43	204.27
Last 5	11:27:21	2700.28	19.69	5.27	34.91	0.15	25.33	2.50	200.57
Last 5	11:32:21	3000.29	19.50	5.24	34.30	0.23	25.32	2.52	213.70
Variance 0			0.57	0.04	0.12			0.09	-16.05
Variance 1			0.63	0.00	0.19			0.07	-3.69
Variance 2			-0.19	-0.03	-0.60			0.01	13.13

Notes

WGWA1 Cg. 5/17/16

Grab Samples

Product Name: Low-Flow System

Date: 2016-05-17 12:10:50

**Project Information:**

Operator Name KJ/BH/TM/CG  
Company Name Golder  
Project Name Wansley CCR  
Site Name Wansley  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 378563  
Turbidity Make/Model Lamotte 2020

**Pump Information:**

Pump Model/Type groping  
Tubing Type polyethylene  
Tubing Diameter .125 in  
Tubing Length 98 ft

Pump placement from TOC 98 ft

**Well Information:**

Well ID WGWA2  
Well diameter 2 in  
Well Total Depth 103.21 ft  
Screen Length 10 ft  
Depth to Water 10.29 ft

**Pumping Information:**

Final Pumping Rate 100 mL/min  
Total System Volume 0.3264919 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.48 in  
Total Volume Pumped 6.8 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	11:37:31	1500.02	17.15	6.28	136.69	2.88	10.58	2.03	194.86
Last 5	11:42:31	1800.02	17.13	6.26	134.96	3.04	10.58	1.85	127.29
Last 5	11:47:31	2100.02	17.04	6.24	133.21	3.66	10.60	1.60	92.41
Last 5	11:52:31	2400.02	17.18	6.23	134.54	3.29	10.58	1.62	66.18
Last 5	11:57:31	2700.02	17.25	6.23	133.82	4.54	10.58	1.60	32.48
Variance 0			-0.09	-0.02	-1.76			-0.25	-34.88
Variance 1			0.13	-0.00	1.33			0.01	-26.23
Variance 2			0.07	-0.00	-0.72			-0.01	-33.69

**Notes**

Sampled by KJ on 5/17/16 at 1200. Start purge at 1108.

**Grab Samples**

Product Name: Low-Flow System

Date: 2016-05-18 12:18:20

Project Information:

Operator Name cg/Kj/bh/tm  
Company Name Golder  
Project Name Wansley CCR  
Site Name Wansley  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 378563  
Turbidity Make/Model Lamottes

Pump Information:

Pump Model/Type geopump  
Tubing Type polyethylene  
Tubing Diameter .125 in  
Tubing Length 12 ft

Pump placement from TOC 12 ft

Well Information:

Well ID WGWA-3  
Well diameter 2 in  
Well Total Depth 18.90 ft  
Screen Length 10 ft  
Depth to Water 2.85 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.1189582 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.12 in  
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 0	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 0
Stabilization									
Last 5	11:49:24	600.03	18.43	5.76	38.75	1.08	2.86	4.90	154.25
Last 5	11:54:24	900.02	18.73	5.64	38.56	1.16	2.86	4.92	149.61
Last 5	11:59:24	1200.03	18.50	5.59	38.53	0.67	2.86	4.87	145.93
Last 5	12:04:24	1500.02	18.56	5.56	38.64	0.95	2.86	4.87	140.40
Last 5	12:09:24	1800.02	18.61	5.55	38.51	1.04	2.86	4.85	136.21
Variance 0			-0.24	-0.05	-0.02			-0.04	-3.68
Variance 1			0.06	-0.03	0.10			0.00	-5.54
Variance 2			0.04	-0.01	-0.13			-0.02	-4.19

Notes

Sampled by KJ at 1215 on 5/18/16.

Grab Samples

Product Name: Low-Flow System

Date: 2016-05-18 12:24:30

Project Information:

Operator Name KJ/BH/TM/CG  
Company Name Golder  
Project Name Wansley CCR  
Site Name Wansley  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 418098  
Turbidity Make/Model Lamotte

Pump Information:

Pump Model/Type geopump  
Tubing Type polyethylene  
Tubing Diameter .125 in  
Tubing Length 68 ft

Pump placement from TOC 68 ft

Well Information:

Well ID WGWA-4  
Well diameter 2 in  
Well Total Depth 73.25 ft  
Screen Length 10 ft  
Depth to Water 4.27 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.2540964 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	12:01:58	600.02	19.06	7.03	149.29	0.26	4.80	0.29	-148.86
Last 5	12:06:58	900.14	19.08	7.11	148.61	0.40	4.81	0.27	-150.36
Last 5	12:11:58	1200.14	19.16	7.15	148.51	0.21	4.83	0.26	-148.78
Last 5	12:16:58	1500.14	19.20	7.19	147.11	0.22	4.85	0.24	-147.09
Last 5	12:21:58	1800.14	19.01	7.23	147.08	0.26	4.86	0.22	-145.41
Variance 0			0.08	0.04	-0.10			-0.00	1.58
Variance 1			0.04	0.04	-1.41			-0.03	1.69
Variance 2			-0.19	0.03	-0.02			-0.01	1.68

Notes

5/18/16 1225. WGWA-4 0.26 NTU

Grab Samples



Product Name: Low-Flow System

Date: 2016-05-18 09:30:15

**Project Information:**

Operator Name KJ/BH/TM/CG  
Company Name Golder  
Project Name Wansley CCR  
Site Name Wansley  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 418098  
Turbidity Make/Model Lamotte

**Pump Information:**

Pump Model/Type geopump  
Tubing Type polyethylene  
Tubing Diameter .125 in  
Tubing Length 18 ft

Pump placement from TOC 18 ft

**Well Information:**

Well ID WGWA-5  
Well diameter 2 in  
Well Total Depth 23.43 ft  
Screen Length 10 ft  
Depth to Water 12.12 ft

**Pumping Information:**

Final Pumping Rate 100 mL/min  
Total System Volume 0.1334373 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 3 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:07:46	600.09	17.19	5.55	27.64	3.82	12.32	2.57	212.10
Last 5	09:12:46	900.09	17.02	5.52	27.50	3.85	12.32	2.52	209.80
Last 5	09:17:46	1200.09	17.10	5.50	27.44	3.86	12.32	2.50	209.21
Last 5	09:22:46	1500.09	17.15	5.49	27.40	3.88	12.32	2.49	208.78
Last 5	09:27:46	1800.09	17.15	5.47	27.38	3.87	12.32	2.48	208.82
Variance 0			0.08	-0.02	-0.06			-0.03	-0.60
Variance 1			0.05	-0.01	-0.04			-0.01	-0.43
Variance 2			0.00	-0.02	-0.02			-0.01	0.04

**Notes**

WGWA-5 CG. 0930 3.87ntu

**Grab Samples**

Product Name: Low-Flow System

Date: 2016-05-18 09:32:07

**Project Information:**

Operator Name cg/Kj/bh/tm  
Company Name Golder  
Project Name Wansley CCR  
Site Name Wansley  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 378563  
Turbidity Make/Model Lamottes

**Pump Information:**

Pump Model/Type geopump  
Tubing Type polyethylene  
Tubing Diameter .125 in  
Tubing Length 97 ft

Pump placement from TOC 97 ft

**Well Information:**

Well ID WGWA-6  
Well diameter 2 in  
Well Total Depth 102.94 ft  
Screen Length 10 ft  
Depth to Water 13.13 ft

**Pumping Information:**

Final Pumping Rate 100 mL/min  
Total System Volume 0.3240787 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 5.64 in  
Total Volume Pumped 3.4 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:03:55	600.03	17.27	7.76	185.11	0.45	13.54	0.46	-113.15
Last 5	09:08:55	900.02	17.20	7.83	184.79	0.46	13.56	0.34	-118.45
Last 5	09:13:55	1200.02	17.36	7.87	183.18	0.51	13.58	0.41	-121.09
Last 5	09:18:55	1500.02	17.41	7.90	182.95	0.48	13.59	0.36	-121.79
Last 5	09:23:55	1800.02	17.53	7.92	182.32	0.50	13.60	0.35	-126.72
Variance 0			0.15	0.04	-1.61			0.07	-2.63
Variance 1			0.06	0.03	-0.22			-0.05	-0.70
Variance 2			0.12	0.01	-0.64			-0.01	-4.93

**Notes**

Sampled by KJ on 5/18/16 at 0930.

**Grab Samples**

Product Name: Low-Flow System

Date: 2016-05-18 09:45:05

**Project Information:**

Operator Name KJ/BH/TM/CG  
Company Name Golder  
Project Name Wansley CCR  
Site Name Wansley  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 416162  
Turbidity Make/Model Lamotte 2020

**Pump Information:**

Pump Model/Type geopump  
Tubing Type polyethylene  
Tubing Diameter .125 in  
Tubing Length 34 ft

Pump placement from TOC 34 ft

**Well Information:**

Well ID WGWA-7  
Well diameter 2 in  
Well Total Depth 39.44 ft  
Screen Length 10 ft  
Depth to Water 22.52 ft

**Pumping Information:**

Final Pumping Rate 100 mL/min  
Total System Volume 0.1720482 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 4 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 0	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 0
Stabilization									
Last 5	09:20:31	600.03	17.21	5.56	27.98	5.58	22.54	7.46	143.45
Last 5	09:25:31	900.02	17.21	5.54	27.15	4.31	22.54	7.52	139.22
Last 5	09:30:31	1200.03	17.20	5.52	26.49	2.92	22.54	7.53	134.10
Last 5	09:35:31	1500.02	17.21	5.49	25.86	1.24	22.54	7.58	131.59
Last 5	09:40:31	1800.02	17.22	5.50	25.58	1.23	22.54	7.53	127.46
Variance 0			-0.02	-0.02	-0.66			0.01	-5.12
Variance 1			0.01	-0.03	-0.63			0.05	-2.51
Variance 2			0.01	0.01	-0.28			-0.05	-4.13

**Notes**

**Grab Samples**

Product Name: Low-Flow System

Date: 2016-05-17 14:11:58

Project Information:

Operator Name KJ/BH/TM/CG  
Company Name Golder  
Project Name Wansley CCR  
Site Name Wansley  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 416162  
Turbidity Make/Model Lamotte

Pump Information:

Pump Model/Type geopump  
Tubing Type polyethylene  
Tubing Diameter .125 in  
Tubing Length 35 ft

Pump placement from TOC 35 ft

Well Information:

Well ID WGWA-18  
Well diameter 2 in  
Well Total Depth 39.50 ft  
Screen Length 10 ft  
Depth to Water 17.53 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.1744614 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 24.84 in  
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	13:50:09	900.02	19.04	8.01	232.93	2.16	19.09	3.07	26.92
Last 5	13:55:09	1200.02	18.91	8.00	231.86	2.91	19.28	2.99	25.22
Last 5	14:00:09	1500.02	18.73	7.99	231.73	2.03	19.43	2.90	18.29
Last 5	14:05:10	1800.39	18.74	7.90	229.41	2.04	19.55	2.61	-77.28
Last 5	14:10:10	2100.39	18.63	7.81	227.72	2.08	19.60	2.32	-104.94
Variance 0			-0.17	-0.01	-0.12			-0.09	-6.93
Variance 1			0.01	-0.09	-2.33			-0.29	-95.57
Variance 2			-0.11	-0.09	-1.68			-0.29	-27.66

Notes

High drawdown

Grab Samples

Product Name: Low-Flow System

Date: 2016-05-19 12:05:19

**Project Information:**

Operator Name TM/KJ/BH/CG  
Company Name Golder  
Project Name Wansley CCR  
Site Name Wansley  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 416162  
Turbidity Make/Model Lamotte 2020

**Pump Information:**

Pump Model/Type geopump  
Tubing Type polyethylene  
Tubing Diameter .125 in  
Tubing Length 54 ft

Pump placement from TOC 54 ft

**Well Information:**

Well ID WGWC-8  
Well diameter 2 in  
Well Total Depth 59.49 ft  
Screen Length 10 ft  
Depth to Water 4.73 ft

**Pumping Information:**

Final Pumping Rate 100 mL/min  
Total System Volume 0.2203119 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 40.1 in  
Total Volume Pumped 4 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 0	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 0
Stabilization									
Last 5	11:43:20	1200.02	19.07	6.04	417.19	2.11	6.99	1.61	64.22
Last 5	11:48:20	1500.02	18.93	6.02	416.79	1.82	7.31	1.60	62.53
Last 5	11:53:20	1800.02	18.73	5.98	417.28	3.28	7.60	1.58	62.79
Last 5	11:58:20	2100.02	18.80	6.01	414.70	2.21	7.84	1.57	59.37
Last 5	12:03:20	2400.02	18.86	5.99	413.19	1.93	8.07	1.68	59.19
Variance 0			-0.20	-0.03	0.49			-0.01	0.26
Variance 1			0.07	0.03	-2.58			-0.01	-3.43
Variance 2			0.06	-0.03	-1.51			0.11	-0.17

**Notes**

Significant drawdown

**Grab Samples**

Product Name: Low-Flow System

Date: 2016-05-19 09:50:04

**Project Information:**

Operator Name TM/KJ/BH/CG  
Company Name Golder  
Project Name Wansley CCR  
Site Name Wansley  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 416162  
Turbidity Make/Model Lamotte 2020

**Pump Information:**

Pump Model/Type geopump  
Tubing Type polyethylene  
Tubing Diameter .125 in  
Tubing Length 55 ft

Pump placement from TOC 55 ft

**Well Information:**

Well ID WGWC-9  
Well diameter 2 in  
Well Total Depth 60.61 ft  
Screen Length 10 ft  
Depth to Water 14.46 ft

**Pumping Information:**

Final Pumping Rate 100 mL/min  
Total System Volume 0.222725 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 42.7 in  
Total Volume Pumped 4 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	09:28:22	1200.69	19.96	6.37	149.40	2.58	17.03	1.76	75.76
Last 5	09:33:22	1500.69	20.28	6.36	147.78	1.30	17.41	1.87	75.65
Last 5	09:38:22	1800.69	19.94	6.35	146.52	2.47	17.62	1.93	74.41
Last 5	09:43:22	2100.70	19.82	6.33	143.78	1.09	17.85	1.92	75.29
Last 5	09:48:22	2400.69	19.75	6.31	145.74	1.91	18.02	1.90	74.44
Variance 0			-0.34	-0.02	-1.26			0.06	-1.23
Variance 1			-0.11	-0.02	-2.74			-0.01	0.88
Variance 2			-0.07	-0.02	1.96			-0.01	-0.86

**Notes**

Significant drawdown

**Grab Samples**

Product Name: Low-Flow System

Date: 2016-05-18 15:29:23

**Project Information:**

Operator Name KJ/BH/TM/CG  
Company Name Golder  
Project Name Wansley CCR  
Site Name Wansley  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 416162  
Turbidity Make/Model Lamotte 2020

**Pump Information:**

Pump Model/Type geopump  
Tubing Type polyethylene  
Tubing Diameter .125 in  
Tubing Length 143 ft

Pump placement from TOC 143 ft

**Well Information:**

Well ID WGWC-10  
Well diameter 2 in  
Well Total Depth 148.80 ft  
Screen Length 10 ft  
Depth to Water 16.87 ft

**Pumping Information:**

Final Pumping Rate 100 mL/min  
Total System Volume 0.4350851 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 31.6 in  
Total Volume Pumped 3 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	15:03:26	300.02	19.17	8.75	110.31	5.31	17.91	4.98	20.17
Last 5	15:08:26	600.02	19.23	8.92	110.48	2.02	18.43	4.80	19.13
Last 5	15:13:26	900.02	19.04	8.94	110.14	2.72	18.90	4.75	18.79
Last 5	15:18:26	1200.02	19.18	8.95	110.01	5.53	19.26	4.70	18.69
Last 5	15:23:26	1500.02	19.18	8.96	110.17	3.06	19.50	4.68	18.78
Variance 0			-0.18	0.03	-0.34			-0.05	-0.34
Variance 1			0.14	0.01	-0.13			-0.05	-0.10
Variance 2			-0.00	0.01	0.16			-0.02	0.08

**Notes**

Significant drawdown

**Grab Samples**

Product Name: Low-Flow System

Date: 2016-05-19 14:04:28

**Project Information:**

Operator Name TM/KJ/BH/CG  
Company Name Golder  
Project Name Wansley CCR  
Site Name Wansley  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 416162  
Turbidity Make/Model Lamotte 2020

**Pump Information:**

Pump Model/Type geopump  
Tubing Type polyethylene  
Tubing Diameter .125 in  
Tubing Length 45 ft

Pump placement from TOC 45 ft

**Well Information:**

Well ID WGWC-11  
Well diameter 2 in  
Well Total Depth 50.28 ft  
Screen Length 10 ft  
Depth to Water 22.59 ft

**Pumping Information:**

Final Pumping Rate 100 mL/min  
Total System Volume 0.1985932 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 21 in  
Total Volume Pumped 3.5 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 0	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 0
Stabilization									
Last 5	13:43:00	900.02	19.49	5.93	39.94	0.89	24.07	6.20	80.64
Last 5	13:48:00	1200.02	19.44	5.92	40.63	1.80	24.20	6.24	80.07
Last 5	13:53:00	1500.02	19.69	5.93	40.41	2.68	24.25	6.15	80.35
Last 5	13:58:00	1800.02	19.80	5.93	40.52	2.40	24.30	6.11	80.10
Last 5	14:03:00	2100.02	19.85	5.93	40.81	4.21	24.34	6.08	80.08
Variance 0			0.25	0.01	-0.22			-0.09	0.28
Variance 1			0.11	0.00	0.10			-0.04	-0.26
Variance 2			0.05	0.00	0.29			-0.03	-0.02

**Notes**

Drawdown stabilized

**Grab Samples**



Product Name: Low-Flow System

Date: 2016-05-19 14:46:14

Project Information:

Operator Name cg/Kj/bh/tm  
Company Name Golder  
Project Name Wansley CCR  
Site Name Wansley  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 378563  
Turbidity Make/Model Lamottes

Pump Information:

Pump Model/Type geopump  
Tubing Type polyethylene  
Tubing Diameter .125 in  
Tubing Length 71 ft

Pump placement from TOC 71 ft

Well Information:

Well ID WGWC-12  
Well diameter 2 in  
Well Total Depth 76.81 ft  
Screen Length 10 ft  
Depth to Water 22.42 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.261336 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.84 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	14:11:20	300.09	19.41	6.85	142.90	3.29	22.50	0.60	18.10
Last 5	14:16:20	600.02	19.43	6.87	143.26	3.00	22.51	0.62	14.86
Last 5	14:21:20	900.02	19.43	6.89	143.14	2.86	22.50	0.62	12.53
Last 5	14:26:21	1201.02	19.52	6.90	143.55	1.62	22.50	0.60	9.68
Last 5	14:31:21	1501.03	19.41	6.91	143.65	1.59	22.49	0.58	9.37
Variance 0			0.00	0.01	-0.11			-0.00	-2.33
Variance 1			0.09	0.01	0.41			-0.02	-2.85
Variance 2			-0.11	0.01	0.10			-0.02	-0.31

Notes

Sampled by KJ at 1435 on 5/19/16. Started purging at 1335, iPod over heated after first 4 readings.

Grab Samples

Product Name: Low-Flow System

Date: 2016-05-19 11:18:32

Project Information:

Operator Name cg/Kj/bh/tm  
Company Name Golder  
Project Name Wansley CCR  
Site Name Wansley  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 378563  
Turbidity Make/Model Lamottes

Pump Information:

Pump Model/Type geopump  
Tubing Type polyethylene  
Tubing Diameter .125 in  
Tubing Length 91 ft

Pump placement from TOC 91 ft

Well Information:

Well ID WGWC-13  
Well diameter 2 in  
Well Total Depth 96.38 ft  
Screen Length 10 ft  
Depth to Water 14.42 ft

Pumping Information:

Final Pumping Rate 80 mL/min  
Total System Volume 0.3095996 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	10:46:14	2700.02	17.93	6.87	172.21	5.34	16.86	1.24	48.34
Last 5	10:51:14	3000.02	17.85	6.85	171.03	5.67	17.04	1.26	48.48
Last 5	10:56:14	3299.88	17.97	6.84	169.95	5.20	17.05	1.27	46.47
Last 5	11:01:14	3599.88	18.38	6.85	168.42	5.49	16.92	1.25	44.54
Last 5	11:06:14	3899.88	18.36	6.85	166.90	4.69	16.94	1.27	45.12
Variance 0			0.12	-0.01	-1.09			0.01	-2.01
Variance 1			0.41	0.00	-1.53			-0.02	-1.93
Variance 2			-0.02	0.00	-1.52			0.02	0.58

Notes

WGWC-13 1115 5/19/16

Grab Samples

Product Name: Low-Flow System

Date: 2016-05-19 11:25:20

**Project Information:**

Operator Name KJ/BH/TM/CG  
Company Name Golder  
Project Name Wansley CCR  
Site Name Wansley  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 418098  
Turbidity Make/Model Lamotte

**Pump Information:**

Pump Model/Type geopump  
Tubing Type polyethylene  
Tubing Diameter .125 in  
Tubing Length 49 ft

Pump placement from TOC 49 ft

**Well Information:**

Well ID WGWC-14  
Well diameter 2 in  
Well Total Depth 54.78 ft  
Screen Length 10 ft  
Depth to Water 15.12 ft

**Pumping Information:**

Final Pumping Rate 0 mL/min  
Total System Volume 0.208246 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 0 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	11:01:13	3000.92	18.18	6.33	149.98	7.39	15.84	1.44	70.58
Last 5	11:06:13	3300.92	18.22	6.33	149.60	5.11	15.84	1.44	71.74
Last 5	11:11:13	3600.92	18.33	6.33	149.52	5.07	15.84	1.43	71.06
Last 5	11:16:13	3900.92	18.31	6.34	148.89	5.01	15.86	1.40	70.67
Last 5	11:21:13	4200.92	18.27	6.34	148.99	3.78	15.88	1.37	71.00
Variance 0			0.11	0.00	-0.08			-0.02	-0.68
Variance 1			-0.02	0.01	-0.63			-0.03	-0.38
Variance 2			-0.04	-0.00	0.11			-0.02	0.33

**Notes**

WGWC-14 1125 5/19/16

**Grab Samples**

Product Name: Low-Flow System

Date: 2016-05-18 15:00:59

**Project Information:**

Operator Name cg/Kj/bh/tm  
Company Name Golder  
Project Name Wansley CCR  
Site Name Wansley  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 378563  
Turbidity Make/Model Lamotte 2020

**Pump Information:**

Pump Model/Type geopump  
Tubing Type polyethylene  
Tubing Diameter .125 in  
Tubing Length 51 ft

Pump placement from TOC 51 ft

**Well Information:**

Well ID WGWC-15  
Well diameter 2 in  
Well Total Depth 56.59 ft  
Screen Length 10 ft  
Depth to Water 8.81 ft

**Pumping Information:**

Final Pumping Rate 80 mL/min  
Total System Volume 0.2130723 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 4.63 in  
Total Volume Pumped 4 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 0	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 0
Stabilization									
Last 5	14:31:02	1800.02	19.85	7.67	312.88	1.63	12.08	0.32	-60.18
Last 5	14:36:02	2100.02	19.67	7.71	306.51	1.50	12.28	0.31	-48.54
Last 5	14:41:03	2401.02	19.65	7.73	289.83	0.86	13.12	0.29	-40.24
Last 5	14:46:03	2701.02	19.54	7.74	303.02	0.89	13.15	0.27	-37.35
Last 5	14:51:04	3002.02	19.75	7.75	298.92	0.53	13.44	0.27	-36.53
Variance 0			-0.03	0.02	-16.68			-0.02	8.30
Variance 1			-0.11	0.02	13.19			-0.02	2.89
Variance 2			0.21	0.00	-4.10			0.00	0.82

**Notes**

Sampled by KJ on 5/18/16 at 1455.

**Grab Samples**

Product Name: Low-Flow System

Date: 2016-05-18 14:34:42

**Project Information:**

Operator Name KJ/BH/TM/CG  
Company Name Golder  
Project Name Wansley CCR  
Site Name Wansley  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 418098  
Turbidity Make/Model Lamotte

**Pump Information:**

Pump Model/Type geopump  
Tubing Type polyethylene  
Tubing Diameter .125 in  
Tubing Length 30 ft

Pump placement from TOC 30 ft

**Well Information:**

Well ID WGWC-16  
Well diameter 2 in  
Well Total Depth 35.07 ft  
Screen Length 10 ft  
Depth to Water 8.54 ft

**Pumping Information:**

Final Pumping Rate 100 mL/min  
Total System Volume 0.1623955 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 3 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	14:13:01	600.78	18.98	6.14	1348.06	0.94	8.58	1.38	109.34
Last 5	14:18:01	900.78	18.93	6.10	1350.10	0.92	8.58	1.32	109.47
Last 5	14:23:01	1200.78	19.15	6.07	1350.01	1.25	8.58	1.28	109.10
Last 5	14:28:01	1500.78	18.92	6.07	1345.94	1.03	8.58	1.24	107.62
Last 5	14:33:01	1800.78	18.79	6.06	1349.87	1.01	8.58	1.20	107.17
Variance 0			0.22	-0.03	-0.09			-0.04	-0.38
Variance 1			-0.23	-0.00	-4.06			-0.04	-1.48
Variance 2			-0.14	-0.01	3.93			-0.04	-0.45

**Notes**

5/18/16 wgwc-16 1.01 NTU 1435

**Grab Samples**

Product Name: Low-Flow System

Date: 2016-05-18 12:32:27

**Project Information:**

Operator Name KJ/BH/TM/CG  
Company Name Golder  
Project Name Wansley CCR  
Site Name Wansley  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 416162  
Turbidity Make/Model Lamotte 2020

**Pump Information:**

Pump Model/Type geopump  
Tubing Type polyethylene  
Tubing Diameter .125 in  
Tubing Length 93 ft

Pump placement from TOC 93 ft

**Well Information:**

Well ID WGWC-17  
Well diameter 2 in  
Well Total Depth 98.03 ft  
Screen Length 10 ft  
Depth to Water 19.76 ft

**Pumping Information:**

Final Pumping Rate 100 mL/min  
Total System Volume 0.314426 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 22.7 in  
Total Volume Pumped 0 L

**Low-Flow Sampling Stabilization Summary**

	Time	Elapsed	Temp C	pH	SpCond µS/	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.2	+/- 5%	+/- 5		+/- 10%	+/- 0
Last 5	12:10:30	600.03	19.35	6.40	180.51	3.03	21.12	0.44	80.56
Last 5	12:15:30	900.02	19.42	6.40	178.62	2.38	21.33	0.39	65.86
Last 5	12:20:30	1200.02	19.31	6.41	173.40	1.95	21.49	0.34	61.22
Last 5	12:25:30	1500.02	19.18	6.41	168.02	1.75	21.59	0.32	58.95
Last 5	12:30:30	1800.29	19.11	6.41	168.76	1.75	21.65	0.33	54.40
Variance 0			-0.11	0.00	-5.22			-0.05	-4.63
Variance 1			-0.13	0.00	-5.38			-0.02	-2.27
Variance 2			-0.07	-0.00	0.75			0.01	-4.55

**Notes**

Drawdown stabilized

**Grab Samples**

# Low-Flow Test Report:

**Test Date / Time:** 2016-07-18 14:34:37

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<b>Location Name:</b> WGWA-1 <b>Latitude:</b> <b>Longitude:</b> <b>Well Diameter:</b> 2 IN <b>Casing Type:</b> PVC <b>Screen Length:</b> 10 FT <b>Top of Screen:</b> 121.55 FT <b>Total Depth:</b> 131.55 FT <b>Initial Depth to Water:</b> 29.11 FT	<b>Pump Type:</b> Geopump <b>Tubing Type:</b> polyethylene <b>Tubing Inner Diameter:</b> 0.125 IN <b>Tubing Length:</b> <b>Pump Intake From TOC:</b> 126 FT <b>Estimated Total Volume Pumped:</b> 3000 ML <b>Flow Cell Volume:</b> 90 ML <b>Final Flow Rate:</b> 100 ML_PER_MIN <b>Final Draw Down:</b> 0 FT	<b>Instrument Used:</b> SmarTROLL MP <b>Serial Number:</b> 417056
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Weather Conditions:

Sunny

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-07-18 14:34:37	00:00	5.52 pH	26.97 °C	33.14 µS/cm	3.05 mg/L	2.39 NTU	978.8 mV	29.11 ft	100.00 ml/min
2016-07-18 14:39:37	04:59	5.27 pH	23.19 °C	34.11 µS/cm	2.06 mg/L	1.20 NTU	1,031.6 mV	29.11 ft	100.00 ml/min
2016-07-18 14:44:37	09:59	5.31 pH	23.39 °C	34.35 µS/cm	1.95 mg/L	1.28 NTU	1,047.7 mV	29.11 ft	100.00 ml/min
2016-07-18 14:49:36	14:58	5.37 pH	23.03 °C	35.13 µS/cm	1.86 mg/L	1.09 NTU	1,057.7 mV	29.11 ft	100.00 ml/min
2016-07-18 14:54:36	19:58	5.40 pH	22.97 °C	35.30 µS/cm	1.73 mg/L	1.10 NTU	1,062.9 mV	29.11 ft	100.00 ml/min
2016-07-18 14:59:36	24:58	5.41 pH	22.27 °C	35.69 µS/cm	1.73 mg/L	0.88 NTU	1,065.4 mV	29.11 ft	100.00 ml/min
2016-07-18 15:04:36	29:59	5.43 pH	22.09 °C	35.59 µS/cm	1.79 mg/L	1.19 NTU	1,064.4 mV	29.11 ft	100.00 ml/min

## Samples

Sample ID:	Description:
WGWA-1	1215 7/19  Fd-1 (AP)  1.19



# Low-Flow Test Report:

**Test Date / Time:** 2016-07-19 12:35:02

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<b>Location Name:</b> WGWA-2 <b>Latitude:</b> <b>Longitude:</b> <b>Well Diameter:</b> 2 in <b>Casing Type:</b> PVC <b>Screen Length:</b> 10 FT <b>Top of Screen:</b> 93.21 FT <b>Total Depth:</b> 103.21 FT <b>Initial Depth to Water:</b> 14.04 FT	<b>Pump Type:</b> Geopump <b>Tubing Type:</b> polyethylene <b>Tubing Inner Diameter:</b> 0.125 IN <b>Tubing Length:</b> <b>Pump Intake From TOC:</b> 98 FT <b>Estimated Total Volume Pumped:</b> <b>3549.998 ML</b> <b>Flow Cell Volume:</b> 90 ML <b>Final Flow Rate:</b> 100 ML_PER_MIN <b>Final Draw Down:</b> 0.31 FT	<b>Instrument Used:</b> SmarTROLL MP <b>Serial Number:</b> 354698
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Weather Conditions:

Cloudy

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10	+/- 5	+/- 10	+/- 5	
2016-07-19 12:35:02	00:00	7.01 pH	29.64 °C	138.03 µS/cm	5.15 mg/L	4.36 NTU	914.8 mV	14.35 ft	150.00 ml/min
2016-07-19 12:40:02	04:59	6.35 pH	20.87 °C	129.58 µS/cm	2.73 mg/L	7.24 NTU	1,084.6 mV	14.44 ft	150.00 ml/min
2016-07-19 12:45:02	09:59	6.31 pH	20.72 °C	127.89 µS/cm	2.22 mg/L	5.57 NTU	1,086.6 mV	14.36 ft	110.00 ml/min
2016-07-19 12:50:02	14:59	6.30 pH	21.20 °C	126.34 µS/cm	2.20 mg/L	3.96 NTU	1,094.0 mV	14.38 ft	100.00 ml/min
2016-07-19 12:55:02	19:59	6.28 pH	20.73 °C	124.53 µS/cm	1.59 mg/L	4.30 NTU	1,100.3 mV	14.38 ft	100.00 ml/min
2016-07-19 13:00:02	24:59	6.28 pH	20.65 °C	124.94 µS/cm	1.51 mg/L	3.88 NTU	1,112.3 mV	14.36 ft	100.00 ml/min
2016-07-19 13:05:02	29:59	6.29 pH	21.04 °C	126.87 µS/cm	1.40 mg/L	3.36 NTU	1,114.2 mV	14.35 ft	100.00 ml/min

## Samples

Sample ID:	Description:
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WGWA-2	Sampled by KJ at 1315 on 7/19/16
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Created using VuSitu from In-Situ, Inc.

# Low-Flow Test Report:

**Test Date / Time:** 2016-07-20 10:06:42

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<p><b>Location Name:</b> WGWA - 3  <b>Latitude:</b>  <b>Longitude:</b>  <b>Well Diameter:</b> 2 IN  <b>Casing Type:</b> PVC  <b>Screen Length:</b> 10 FT  <b>Top of Screen:</b> 8.9 FT  <b>Total Depth:</b> 18.9 FT  <b>Initial Depth to Water:</b> 4.39 FT</p>	<p><b>Pump Type:</b> Peristaltic  <b>Tubing Type:</b> polyethylene  <b>Tubing Inner Diameter:</b> 0.125 IN  <b>Tubing Length:</b>  <b>Pump Intake From TOC:</b> 13.9 FT  <b>Estimated Total Volume Pumped:</b> 4500 ML  <b>Flow Cell Volume:</b> 90 ML  <b>Final Flow Rate:</b> 150 ML_PER_MIN  <b>Final Draw Down:</b> 0.02 FT</p>	<p><b>Instrument Used:</b> SmarTROLL MP  <b>Serial Number:</b> 417070</p>
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**Test Notes:**

Golder Associates

Groundwater

Lamotte 2020

**Low-Flow Readings:**

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-07-20 10:06:42	00:00	5.71 pH	23.19 °C	35.25 µS/cm	5.27 mg/L		219.5 mV	4.39 ft	150.00 ml/min
2016-07-20 10:11:42	04:59	5.66 pH	21.66 °C	35.89 µS/cm	5.35 mg/L	0.61 NTU	161.4 mV	4.40 ft	150.00 ml/min
2016-07-20 10:16:42	10:00	5.66 pH	21.24 °C	35.71 µS/cm	5.26 mg/L	2.48 NTU	162.4 mV	4.40 ft	150.00 ml/min
2016-07-20 10:21:42	15:00	5.66 pH	21.42 °C	35.53 µS/cm	5.20 mg/L	1.06 NTU	150.6 mV	4.40 ft	150.00 ml/min
2016-07-20 10:26:42	20:00	5.66 pH	21.37 °C	35.32 µS/cm	5.16 mg/L	0.30 NTU	152.7 mV	4.40 ft	150.00 ml/min
2016-07-20 10:31:42	25:00	5.66 pH	21.26 °C	35.48 µS/cm	5.18 mg/L	0.90 NTU	148.9 mV	4.41 ft	150.00 ml/min

**Samples**

Sample ID:	Description:
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# Low-Flow Test Report:

**Test Date / Time:** 2016-07-20 10:09:05

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<b>Location Name:</b> WGWA-4 <b>Latitude:</b> <b>Longitude:</b> <b>Well Diameter:</b> 2 IN <b>Casing Type:</b> PVC <b>Screen Length:</b> 10 FT <b>Top of Screen:</b> 63.25 FT <b>Total Depth:</b> 73.25 FT <b>Initial Depth to Water:</b>	<b>Pump Type:</b> Geopump <b>Tubing Type:</b> polyethylene <b>Tubing Inner Diameter:</b> 0.125 IN <b>Tubing Length:</b> <b>Pump Intake From TOC:</b> 68 FT <b>Estimated Total Volume Pumped:</b> 5500.001 ML <b>Flow Cell Volume:</b> 90 ML <b>Final Flow Rate:</b> 100 ML_PER_MIN <b>Final Draw Down:</b> 0.91 FT	<b>Instrument Used:</b> SmarTROLL MP <b>Serial Number:</b> 339797
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Weather Conditions:

Sunny 90

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-07-20 10:09:05	00:00	8.00 pH	23.86 °C	157.53 µS/cm	0.76 mg/L	1.95 NTU	-78.2 mV	7.22 ft	100.00 ml/min
2016-07-20 10:14:05	05:00	7.73 pH	23.52 °C	151.96 µS/cm	0.37 mg/L	2.33 NTU	-106.8 mV	7.35 ft	100.00 ml/min
2016-07-20 10:19:05	10:00	7.59 pH	23.03 °C	150.99 µS/cm	0.28 mg/L	3.35 NTU	-117.0 mV	7.49 ft	100.00 ml/min
2016-07-20 10:24:05	15:00	7.50 pH	23.08 °C	149.41 µS/cm	0.22 mg/L	4.68 NTU	-120.6 mV	7.55 ft	100.00 ml/min
2016-07-20 10:29:05	20:00	7.43 pH	23.07 °C	149.60 µS/cm	0.20 mg/L	5.34 NTU	-120.3 mV	7.64 ft	100.00 ml/min
2016-07-20 10:34:05	25:00	7.39 pH	22.99 °C	148.13 µS/cm	0.18 mg/L	6.42 NTU	-120.6 mV	7.69 ft	100.00 ml/min
2016-07-20 10:39:05	30:00	7.34 pH	22.81 °C	148.14 µS/cm	0.17 mg/L	7.10 NTU	-119.4 mV	7.73 ft	100.00 ml/min
2016-07-20 10:44:05	35:00	7.32 pH	22.83 °C	147.35 µS/cm	0.16 mg/L	6.58 NTU	-117.8 mV	7.77 ft	100.00 ml/min
2016-07-20 10:49:05	40:00	7.31 pH	22.63 °C	146.76 µS/cm	0.17 mg/L	6.12 NTU	-116.0 mV	7.79 ft	100.00 ml/min
2016-07-20 10:54:05	45:00	7.30 pH	22.66 °C	145.46 µS/cm	0.16 mg/L	6.33 NTU	-115.3 mV	7.81 ft	100.00 ml/min

2016-07-20 10:59:05	50:00	7.29 pH	22.26 °C	145.44 µS/cm	0.15 mg/L	5.71 NTU	-113.5 mV	7.81 ft	100.00 ml/min
2016-07-20 11:04:05	55:00	7.28 pH	22.36 °C	144.77 µS/cm	0.14 mg/L	4.15 NTU	-112.4 mV	7.81 ft	100.00 ml/min

## Samples

Sample ID:	Description:
WGWA-4	4.15NTU 1105 FD-1(AP)

# Low-Flow Test Report:

**Test Date / Time:** 2016-07-19 14:18:33

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<p><b>Location Name: WGWA-5</b>  <b>Latitude:</b>  <b>Longitude:</b>  <b>Well Diameter: 2 IN</b>  <b>Casing Type: PVC</b>  <b>Screen Length: 10 FT</b>  <b>Top of Screen: 13.43 FT</b>  <b>Total Depth: 23.43 FT</b>  <b>Initial Depth to Water: 16.29 FT</b></p>	<p><b>Pump Type: Peristaltic</b>  <b>Tubing Type: polyethylene</b>  <b>Tubing Inner Diameter: 0.125 IN</b>  <b>Tubing Length:</b>  <b>Pump Intake From TOC: 20 FT</b>  <b>Estimated Total Volume Pumped: 13500 ML</b>  <b>Flow Cell Volume: 90 ML</b>  <b>Final Flow Rate: 200 ML_PER_MIN</b>  <b>Final Draw Down: 1.55 FT</b></p>	<p><b>Instrument Used: SmarTROLL MP</b>  <b>Serial Number: 417070</b></p>
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**Test Notes:**

Golder Associates

Groundwater

Lamotte 2020

**Low-Flow Readings:**

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-07-19 14:18:33	00:00	5.46 pH	23.51 °C	29.79 µS/cm	0.51 mg/L		270.5 mV	16.29 ft	100.00 ml/min
2016-07-19 14:23:33	04:59	5.36 pH	21.46 °C	30.34 µS/cm	0.48 mg/L	4.50 NTU	223.8 mV		100.00 ml/min
2016-07-19 14:28:33	09:59	5.34 pH	21.46 °C	30.15 µS/cm	0.37 mg/L		226.7 mV		100.00 ml/min
2016-07-19 14:33:33	14:59	5.32 pH	21.45 °C	30.05 µS/cm	0.35 mg/L		216.6 mV		100.00 ml/min
2016-07-19 14:38:33	19:59	5.31 pH	20.49 °C	29.94 µS/cm	0.32 mg/L		214.6 mV		100.00 ml/min
2016-07-19 14:43:33	24:59	5.29 pH	19.76 °C	30.42 µS/cm	0.29 mg/L		211.8 mV		100.00 ml/min
2016-07-19 14:48:33	29:59	5.30 pH	19.54 °C	30.40 µS/cm	0.35 mg/L		204.0 mV		100.00 ml/min
2016-07-19 14:53:33	34:59	5.32 pH	19.56 °C	29.95 µS/cm	0.45 mg/L		200.0 mV		100.00 ml/min
2016-07-19 14:58:33	39:59	5.27 pH	20.04 °C	29.84 µS/cm	2.91 mg/L		205.4 mV		100.00 ml/min
2016-07-19 15:03:33	44:59	5.34 pH	19.56 °C	30.40 µS/cm	1.92 mg/L	2.88 NTU	188.8 mV	17.55 ft	100.00 ml/min
2016-07-19 15:08:33	49:59	5.31 pH	19.50 °C	29.79 µS/cm	1.09 mg/L	3.16 NTU	188.4 mV	17.58 ft	100.00 ml/min
2016-07-19 15:13:33	54:59	5.33 pH	19.50 °C	29.69 µS/cm	0.80 mg/L	2.88 NTU	188.4 mV	17.65 ft	100.00 ml/min

2016-07-19 15:18:33	59:59	5.33 pH	19.55 °C	29.60 µS/cm	0.73 mg/L	2.76 NTU	184.7 mV	17.71 ft	100.00 ml/min
2016-07-19 15:23:33	01:04:59	5.32 pH	19.41 °C	29.68 µS/cm	0.72 mg/L	2.26 NTU	182.8 mV	17.78 ft	100.00 ml/min
2016-07-19 15:28:33	01:09:59	5.34 pH	19.38 °C	29.89 µS/cm	0.73 mg/L	1.99 NTU	189.8 mV	17.84 ft	100.00 ml/min

## Samples

Sample ID:	Description:
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# Low-Flow Test Report:

**Test Date / Time:** 2016-07-19 14:40:55

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<p><b>Location Name:</b> WGWA-6  <b>Latitude:</b>  <b>Longitude:</b>  <b>Well Diameter:</b> 2 IN  <b>Casing Type:</b> PVC  <b>Screen Length:</b> 10 FT  <b>Top of Screen:</b> 92.94 FT  <b>Total Depth:</b> 102.94 FT  <b>Initial Depth to Water:</b></p>	<p><b>Pump Type:</b> Geopump  <b>Tubing Type:</b> polyethylene  <b>Tubing Inner Diameter:</b> 0.125 IN  <b>Tubing Length:</b>  <b>Pump Intake From TOC:</b>  <b>Estimated Total Volume Pumped:</b>  <b>6000 ML</b>  <b>Flow Cell Volume:</b> 90 ML  <b>Final Flow Rate:</b> 100 ML_PER_MIN  <b>Final Draw Down:</b> 0.83 FT</p>	<p><b>Instrument Used:</b> SmarTROLL MP  <b>Serial Number:</b> 339797</p>
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**Test Notes:**

Golder Associates

Groundwater

Lamotte 2020

**Weather Conditions:**

Sunny 90 degrees

**Low-Flow Readings:**

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-07-19 14:40:55	00:00	6.53 pH	27.66 °C	146.92 µS/cm	3.31 mg/L	0.35 NTU	217.9 mV	16.73 ft	100.00 ml/min
2016-07-19 14:45:55	05:00	6.34 pH	22.87 °C	175.72 µS/cm	0.83 mg/L	1.73 NTU	27.8 mV	16.75 ft	100.00 ml/min
2016-07-19 14:50:55	10:00	6.52 pH	23.16 °C	176.28 µS/cm	0.55 mg/L	1.62 NTU	-25.7 mV	16.91 ft	100.00 ml/min
2016-07-19 14:55:55	15:00	6.65 pH	22.99 °C	177.25 µS/cm	0.45 mg/L	1.53 NTU	-57.4 mV	16.99 ft	100.00 ml/min
2016-07-19 15:00:55	20:00	6.72 pH	22.65 °C	177.01 µS/cm	0.39 mg/L	1.68 NTU	-76.8 mV	17.01 ft	100.00 ml/min
2016-07-19 15:05:55	25:00	6.82 pH	22.20 °C	177.29 µS/cm	0.36 mg/L	0.74 NTU	-89.6 mV	17.01 ft	100.00 ml/min
2016-07-19 15:10:55	30:00	6.90 pH	21.69 °C	178.57 µS/cm	0.33 mg/L	0.87 NTU	-97.7 mV	17.01 ft	100.00 ml/min
2016-07-19 15:15:55	35:00	6.96 pH	22.09 °C	176.90 µS/cm	0.32 mg/L	1.12 NTU	-103.4 mV	17.01 ft	100.00 ml/min
2016-07-19 15:20:55	39:59	7.02 pH	21.95 °C	174.01 µS/cm	0.28 mg/L	0.52 NTU	-109.1 mV	17.01 ft	100.00 ml/min
2016-07-19 15:25:55	45:00	7.07 pH	21.66 °C	175.47 µS/cm	0.28 mg/L	0.76 NTU	-110.9 mV	17.01 ft	100.00 ml/min



2016-07-19 15:30:55	50:00	7.13 pH	21.37 °C	174.34 µS/cm	0.26 mg/L	0.89 NTU	-112.3 mV	17.01 ft	100.00 ml/min
2016-07-19 15:35:55	55:00	7.15 pH	21.64 °C	176.88 µS/cm	0.26 mg/L	0.84 NTU	-114.4 mV	17.01 ft	100.00 ml/min

## Samples

Sample ID:	Description:
WGWA-6	0.84 NTU 1540

# Low-Flow Test Report:

**Test Date / Time:** 2016-07-19 11:54:36

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<b>Location Name:</b> WGWA-7 <b>Latitude:</b> <b>Longitude:</b> <b>Well Diameter:</b> 2 IN <b>Casing Type:</b> PVC <b>Screen Length:</b> 10 FT <b>Top of Screen:</b> 29.44 FT <b>Total Depth:</b> 39.44 FT <b>Initial Depth to Water:</b> 27.33 FT	<b>Pump Type:</b> Geopump <b>Tubing Type:</b> polyethylene <b>Tubing Inner Diameter:</b> 0.125 IN <b>Tubing Length:</b> <b>Pump Intake From TOC:</b> 34 FT <b>Estimated Total Volume Pumped:</b> 4999.999 ML <b>Flow Cell Volume:</b> 90 ML <b>Final Flow Rate:</b> 100 ML_PER_MIN <b>Final Draw Down:</b> 0 FT	<b>Instrument Used:</b> SmartROLL MP <b>Serial Number:</b> 339797
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Weather Conditions:

Sunny

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-07-19 11:54:36	00:00	9.74 pH	30.86 °C	35.03 µS/cm	6.90 mg/L	2.42 NTU	187.6 mV	27.33 ft	100.00 ml/min
2016-07-19 11:59:36	04:59	8.12 pH	22.22 °C	26.54 µS/cm	7.83 mg/L	2.20 NTU	221.9 mV	27.33 ft	100.00 ml/min
2016-07-19 12:04:36	09:59	7.25 pH	21.55 °C	25.89 µS/cm	7.87 mg/L	3.61 NTU	214.8 mV	27.33 ft	100.00 ml/min
2016-07-19 12:09:36	15:00	6.55 pH	21.41 °C	25.81 µS/cm	7.70 mg/L	1.67 NTU	219.4 mV	27.33 ft	100.00 ml/min
2016-07-19 12:14:36	19:59	6.07 pH	21.60 °C	25.03 µS/cm	7.86 mg/L	0.73 NTU	218.9 mV	27.33 ft	100.00 ml/min
2016-07-19 12:19:36	24:59	5.83 pH	21.55 °C	24.76 µS/cm	7.82 mg/L	1.81 NTU	216.9 mV	27.33 ft	100.00 ml/min
2016-07-19 12:24:36	30:00	5.65 pH	21.87 °C	24.83 µS/cm	7.74 mg/L	1.23 NTU	218.9 mV	27.33 ft	100.00 ml/min
2016-07-19 12:29:36	34:59	5.57 pH	21.91 °C	24.69 µS/cm	7.64 mg/L	1.44 NTU	221.0 mV	27.33 ft	100.00 ml/min
2016-07-19 12:34:36	40:00	5.49 pH	22.27 °C	24.66 µS/cm	7.63 mg/L	0.35 NTU	220.9 mV	27.33 ft	100.00 ml/min
2016-07-19 12:39:36	44:59	5.46 pH	22.17 °C	24.42 µS/cm	7.55 mg/L	1.04 NTU	224.9 mV	27.33 ft	100.00 ml/min

2016-07-19 12:44:36	49:59	5.43 pH	22.45 °C	24.44 µS/cm	7.62 mg/L	0.89 NTU	225.2 mV	27.33 ft	100.00 ml/min
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## Samples

Sample ID:	Description:
WGWA-7	0.89NTU 12:45

# Low-Flow Test Report:

**Test Date / Time:** 2016-07-19 11:49:30

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<p><b>Location Name: WGWA-18</b>  <b>Latitude:</b>  <b>Longitude:</b>  <b>Well Diameter: 2 IN</b>  <b>Casing Type: Pvc</b>  <b>Screen Length: 10 FT</b>  <b>Top of Screen: 29.55 FT</b>  <b>Total Depth: 39.55 FT</b>  <b>Initial Depth to Water: 20.3 FT</b></p>	<p><b>Pump Type: Peristaltic</b>  <b>Tubing Type: polyethylene</b>  <b>Tubing Inner Diameter: 0.125 IN</b>  <b>Tubing Length:</b>  <b>Pump Intake From TOC: 34.55 FT</b>  <b>Estimated Total Volume Pumped: 3984.845 ML</b>  <b>Flow Cell Volume: 90 ML</b>  <b>Final Flow Rate: 100 ML_PER_MIN</b>  <b>Final Draw Down: 0 FT</b></p>	<p><b>Instrument Used: SmarTROLL MP</b>  <b>Serial Number: 417070</b></p>
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**Test Notes:**

Golder Associates

Groundwater

Lamotte 2020

**Low-Flow Readings:**

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 10	+/- 10 %	+/- 5	
2016-07-19 11:49:30	00:00	7.71 pH	24.15 °C	221.44 µS/cm	1.67 mg/L		288.2 mV	20.30 ft	100.00 ml/min
2016-07-19 11:54:30	04:59	7.79 pH	21.46 °C	233.14 µS/cm	1.76 mg/L		160.2 mV	20.30 ft	100.00 ml/min
2016-07-19 11:57:59	08:28	7.84 pH	21.10 °C	231.23 µS/cm	1.56 mg/L		145.3 mV	20.30 ft	100.00 ml/min
2016-07-19 12:00:16	10:46	7.85 pH	20.61 °C	230.48 µS/cm	1.42 mg/L	2.07	135.9 mV	20.30 ft	100.00 ml/min
2016-07-19 12:01:09	11:38	7.84 pH	20.53 °C	229.97 µS/cm	1.38 mg/L	5.67	137.3 mV	20.30 ft	100.00 ml/min
2016-07-19 12:06:09	16:38	7.66 pH	20.35 °C	225.06 µS/cm	1.03 mg/L	8.49	-68.7 mV	20.30 ft	100.00 ml/min
2016-07-19 12:11:09	21:38	7.48 pH	20.50 °C	223.76 µS/cm	0.88 mg/L	7.82	-104.3 mV	20.30 ft	100.00 ml/min
2016-07-19 12:16:09	26:39	7.38 pH	20.66 °C	219.03 µS/cm	0.58 mg/L	7.63	-115.0 mV	20.30 ft	100.00 ml/min
2016-07-19 12:21:09	31:39	7.35 pH	20.53 °C	219.34 µS/cm	0.60 mg/L	3.75	-115.1 mV	20.30 ft	100.00 ml/min
2016-07-19 12:26:09	36:39	7.31 pH	21.06 °C	215.11 µS/cm	0.47 mg/L	4.80	-116.3 mV	20.30 ft	100.00 ml/min
2016-07-19 12:31:09	41:39	7.25 pH	21.57 °C	212.84 µS/cm	0.51 mg/L	4.60	-114.9 mV	20.30 ft	100.00 ml/min

**Samples**

Sample ID:	Description:
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Created using VuSitu from In-Situ, Inc.

# Low-Flow Test Report:

**Test Date / Time:** 2016-07-20 14:39:12

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<b>Location Name:</b> WGWC-8 <b>Latitude:</b> <b>Longitude:</b> <b>Well Diameter:</b> 2 IN <b>Casing Type:</b> PVC <b>Screen Length:</b> 10 FT <b>Top of Screen:</b> 49.42 FT <b>Total Depth:</b> 59.42 FT <b>Initial Depth to Water:</b>	<b>Pump Type:</b> Geopump <b>Tubing Type:</b> Polyethylene <b>Tubing Inner Diameter:</b> 0.125 IN <b>Tubing Length:</b> <b>Pump Intake From TOC:</b> 54 FT <b>Estimated Total Volume Pumped:</b> 6000 ML <b>Flow Cell Volume:</b> 90 ML <b>Final Flow Rate:</b> 100 ML_PER_MIN <b>Final Draw Down:</b> 3.8 FT	<b>Instrument Used:</b> SmarTROLL MP <b>Serial Number:</b> 339797
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Weather Conditions:

Sunny

95

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-07-20 14:39:12	00:00	7.82 pH	24.56 °C	456.19 µS/cm	1.38 mg/L	3.52 NTU	337.8 mV	6.60 ft	100.00 ml/min
2016-07-20 14:44:12	05:00	7.47 pH	24.69 °C	464.03 µS/cm	1.26 mg/L	2.06 NTU	166.8 mV	7.10 ft	100.00 ml/min
2016-07-20 14:49:12	10:00	7.21 pH	24.99 °C	457.51 µS/cm	1.18 mg/L	1.73 NTU	163.2 mV	7.53 ft	100.00 ml/min
2016-07-20 14:54:12	15:00	6.99 pH	24.72 °C	459.59 µS/cm	1.14 mg/L	2.70 NTU	182.0 mV	7.92 ft	100.00 ml/min
2016-07-20 14:59:12	20:00	6.78 pH	24.32 °C	454.75 µS/cm	1.13 mg/L	2.61 NTU	200.9 mV	8.24 ft	100.00 ml/min
2016-07-20 15:04:12	25:00	6.63 pH	24.48 °C	461.78 µS/cm	1.15 mg/L	3.47 NTU	209.6 mV	8.57 ft	100.00 ml/min
2016-07-20 15:09:12	30:00	6.49 pH	24.62 °C	459.86 µS/cm	1.17 mg/L	4.20 NTU	231.6 mV	8.74 ft	100.00 ml/min
2016-07-20 15:14:12	35:00	6.41 pH	24.35 °C	458.60 µS/cm	1.20 mg/L	2.14 NTU	228.8 mV	8.95 ft	100.00 ml/min
2016-07-20 15:19:12	40:00	6.34 pH	23.87 °C	460.75 µS/cm	1.15 mg/L	2.44 NTU	247.2 mV	9.17 ft	100.00 ml/min

2016-07-20 15:24:12	45:00	6.28 pH	23.52 °C	463.29 µS/cm	1.15 mg/L	1.90 NTU	235.6 mV	9.33 ft	100.00 ml/min
2016-07-20 15:29:12	50:00	6.24 pH	23.38 °C	459.29 µS/cm	1.15 mg/L	2.71 NTU	235.9 mV	9.49 ft	100.00 ml/min
2016-07-20 15:34:12	55:00	6.19 pH	23.54 °C	455.30 µS/cm	1.12 mg/L	3.99 NTU	221.2 mV	9.63 ft	100.00 ml/min

## Samples

Sample ID:	Description:
WGWC-8	

# Low-Flow Test Report:

**Test Date / Time:** 2016-07-20 14:17:23

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<p><b>Location Name:</b> WGWC-9  <b>Latitude:</b>  <b>Longitude:</b>  <b>Well Diameter:</b> 2 IN  <b>Casing Type:</b> PVC  <b>Screen Length:</b> 10 FT  <b>Top of Screen:</b> 50.88 FT  <b>Total Depth:</b> 60.88 FT  <b>Initial Depth to Water:</b> 12.53 FT</p>	<p><b>Pump Type:</b> Peristaltic  <b>Tubing Type:</b> polyethylene  <b>Tubing Inner Diameter:</b> 0.125 IN  <b>Tubing Length:</b>  <b>Pump Intake From TOC:</b> 55.88 FT  <b>Estimated Total Volume Pumped:</b>  <b>3500 ML</b>  <b>Flow Cell Volume:</b> 90 ML  <b>Final Flow Rate:</b> 100 ML_PER_MIN  <b>Final Draw Down:</b> 3.31 FT</p>	<p><b>Instrument Used:</b> SmarTROLL MP  <b>Serial Number:</b> 417070</p>
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**Test Notes:**

Golder Associates

Groundwater

Lamotte 2020

**Low-Flow Readings:**

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-07-20 14:17:23	00:00	6.48 pH	27.64 °C	155.31 µS/cm	1.87 mg/L		410.9 mV	12.53 ft	100.00 ml/min
2016-07-20 14:22:23	04:59	6.37 pH	24.70 °C	160.69 µS/cm	0.94 mg/L	2.40 NTU	219.6 mV	13.64 ft	100.00 ml/min
2016-07-20 14:27:23	09:59	6.37 pH	24.55 °C	160.72 µS/cm	1.06 mg/L	4.07 NTU	177.7 mV	14.29 ft	100.00 ml/min
2016-07-20 14:32:23	15:00	6.38 pH	24.55 °C	157.27 µS/cm	1.32 mg/L	2.27 NTU	127.3 mV	14.76 ft	100.00 ml/min
2016-07-20 14:37:23	20:00	6.39 pH	24.69 °C	156.60 µS/cm	1.63 mg/L	1.61 NTU	98.8 mV	15.27 ft	100.00 ml/min
2016-07-20 14:42:23	24:59	6.36 pH	24.65 °C	156.02 µS/cm	1.76 mg/L	1.20 NTU	90.5 mV	15.62 ft	100.00 ml/min
2016-07-20 14:47:23	30:00	6.37 pH	25.22 °C	156.18 µS/cm	1.85 mg/L	2.66 NTU	83.6 mV	15.75 ft	100.00 ml/min
2016-07-20 14:52:23	35:00	6.35 pH	26.03 °C	156.76 µS/cm	1.79 mg/L	0.45 NTU	75.3 mV	15.84 ft	100.00 ml/min

**Samples**

Sample ID:	Description:
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# Low-Flow Test Report:

**Test Date / Time:** 2016-07-20 12:38:41

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<b>Location Name:</b> WGWC-10 <b>Latitude:</b> <b>Longitude:</b> <b>Well Diameter:</b> 2 IN <b>Casing Type:</b> PVC <b>Screen Length:</b> 10 FT <b>Top of Screen:</b> 138.1 FT <b>Total Depth:</b> 148.1 FT <b>Initial Depth to Water:</b>	<b>Pump Type:</b> Geopump <b>Tubing Type:</b> polyethylene <b>Tubing Inner Diameter:</b> 0.125 IN <b>Tubing Length:</b> <b>Pump Intake From TOC:</b> 143 FT <b>Estimated Total Volume Pumped:</b> 6000 ML <b>Flow Cell Volume:</b> 90 ML <b>Final Flow Rate:</b> 100 ML_PER_MIN <b>Final Draw Down:</b> 3.59 FT	<b>Instrument Used:</b> SmarTROLL MP <b>Serial Number:</b> 339797
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Weather Conditions:

Sunny

95

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-07-20 12:38:41	00:00	7.43 pH	23.02 °C	98.23 µS/cm	5.21 mg/L	2.92 NTU	90.4 mV	18.73 ft	100.00 ml/min
2016-07-20 12:43:41	05:00	7.67 pH	22.18 °C	102.23 µS/cm	4.65 mg/L	2.38 NTU	46.4 mV	19.28 ft	100.00 ml/min
2016-07-20 12:48:41	09:59	7.91 pH	21.93 °C	102.26 µS/cm	4.57 mg/L	1.79 NTU	44.0 mV	19.95 ft	100.00 ml/min
2016-07-20 12:53:41	14:59	8.09 pH	21.42 °C	102.76 µS/cm	4.62 mg/L	3.67 NTU	44.8 mV	20.40 ft	100.00 ml/min
2016-07-20 12:58:41	20:00	8.22 pH	21.78 °C	101.97 µS/cm	4.52 mg/L	2.97 NTU	45.2 mV	20.78 ft	100.00 ml/min
2016-07-20 13:03:41	24:59	8.34 pH	21.51 °C	101.00 µS/cm	4.50 mg/L	1.13 NTU	46.6 mV	21.02 ft	100.00 ml/min
2016-07-20 13:08:41	29:59	8.43 pH	21.37 °C	102.23 µS/cm	4.55 mg/L	1.29 NTU	46.1 mV	21.30 ft	100.00 ml/min
2016-07-20 13:13:41	35:00	8.51 pH	21.33 °C	101.54 µS/cm	4.58 mg/L	1.12 NTU	46.7 mV	21.49 ft	100.00 ml/min
2016-07-20 13:18:41	40:00	8.57 pH	21.41 °C	102.11 µS/cm	4.57 mg/L	0.37 NTU	47.7 mV	21.62 ft	100.00 ml/min

**Samples**

Sample ID:	Description:
WGWC-10	Sampled early per Pete Robinson per Joju

# Low-Flow Test Report:

**Test Date / Time:** 2016-07-18 14:39:16

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<b>Location Name:</b> WGWC-11 <b>Latitude:</b> <b>Longitude:</b> <b>Well Diameter:</b> 2 IN <b>Casing Type:</b> PVC <b>Screen Length:</b> 10 FT <b>Top of Screen:</b> 40.28 FT <b>Total Depth:</b> 50.28 FT <b>Initial Depth to Water:</b> 26.67 FT	<b>Pump Type:</b> Geopump <b>Tubing Type:</b> polyethylene <b>Tubing Inner Diameter:</b> 0.125 IN <b>Tubing Length:</b> <b>Pump Intake From TOC:</b> 45 FT <b>Estimated Total Volume Pumped:</b> 3000 ML <b>Flow Cell Volume:</b> 90 ML <b>Final Flow Rate:</b> 100 ML_PER_MIN <b>Final Draw Down:</b> 1.56 FT	<b>Instrument Used:</b> SmarTROLL MP <b>Serial Number:</b> 354698
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Weather Conditions:

Sunny

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-07-18 14:39:16	00:00	6.16 pH	22.11 °C	39.12 µS/cm	7.34 mg/L	5.27 NTU	1,053.1 mV	26.67 ft	100.00 ml/min
2016-07-18 14:44:16	04:59	5.96 pH	20.93 °C	40.37 µS/cm	7.63 mg/L	8.48 NTU	1,057.1 mV	27.98 ft	100.00 ml/min
2016-07-18 14:49:16	09:59	5.94 pH	21.27 °C	40.14 µS/cm	7.58 mg/L	6.62 NTU	1,062.7 mV	28.17 ft	100.00 ml/min
2016-07-18 14:54:16	14:59	5.95 pH	21.61 °C	40.00 µS/cm	7.62 mg/L	5.48 NTU	1,064.1 mV	28.23 ft	100.00 ml/min
2016-07-18 14:59:15	19:59	5.96 pH	21.43 °C	39.39 µS/cm	7.69 mg/L	4.74 NTU	1,067.8 mV	28.23 ft	100.00 ml/min
2016-07-18 15:04:15	24:58	5.97 pH	21.80 °C	39.30 µS/cm	7.80 mg/L	4.37 NTU	1,068.3 mV	28.23 ft	100.00 ml/min
2016-07-18 15:09:15	29:58	5.97 pH	21.69 °C	39.54 µS/cm	7.50 mg/L	3.46 NTU	1,068.9 mV	28.23 ft	100.00 ml/min

## Samples

Sample ID:	Description:
WGWC-11	

Created using VuSitu from In-Situ, Inc.

# Low-Flow Test Report:

**Test Date / Time:** 2016-07-20 14:34:17

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<b>Location Name:</b> WGWC-12 <b>Latitude:</b> <b>Longitude:</b> <b>Well Diameter:</b> 2 IN <b>Casing Type:</b> PVC <b>Screen Length:</b> 10 M <b>Top of Screen:</b> 67.27 M <b>Total Depth:</b> 77.27 FT <b>Initial Depth to Water:</b> 26.37 FT	<b>Pump Type:</b> Geopump <b>Tubing Type:</b> polyethylene <b>Tubing Inner Diameter:</b> 0.125 IN <b>Tubing Length:</b> <b>Pump Intake From TOC:</b> 72 FT <b>Estimated Total Volume Pumped:</b> 5500.001 ML <b>Flow Cell Volume:</b> 90 ML <b>Final Flow Rate:</b> 220 ML_PER_MIN <b>Final Draw Down:</b> 0.38 FT	<b>Instrument Used:</b> SmarTROLL MP <b>Serial Number:</b> 448902
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Weather Conditions:

Sunny 97

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-07-20 14:34:17	00:00	6.93 pH	22.36 °C	147.17 µS/cm	2.98 mg/L	17.20 NTU	167.4 mV	26.65 ft	220.00 ml/min
2016-07-20 14:39:17	05:00	6.92 pH	19.42 °C	149.51 µS/cm	0.91 mg/L	14.40 NTU	70.6 mV	26.73 ft	220.00 ml/min
2016-07-20 14:44:17	09:59	6.93 pH	19.09 °C	147.76 µS/cm	0.50 mg/L	9.46 NTU	62.4 mV	26.75 ft	220.00 ml/min
2016-07-20 14:49:17	15:00	6.94 pH	18.98 °C	149.28 µS/cm	0.40 mg/L	6.50 NTU	55.5 mV	26.75 ft	220.00 ml/min
2016-07-20 14:54:17	19:59	6.97 pH	19.02 °C	149.04 µS/cm	0.32 mg/L	5.55 NTU	41.8 mV	26.75 ft	220.00 ml/min
2016-07-20 14:59:17	25:00	6.96 pH	18.97 °C	149.85 µS/cm	0.29 mg/L	4.94 NTU	32.2 mV	26.75 ft	220.00 ml/min

## Samples

Sample ID:	Description:
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WGWC-12

Sampled by KJ at 1505 on 7/20/16.

Created using VuSitu from In-Situ, Inc.

# Low-Flow Test Report:

**Test Date / Time:** 2016-07-20 10:46:56

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<b>Location Name:</b> WGWC-13 <b>Latitude:</b> <b>Longitude:</b> <b>Well Diameter:</b> 2 IN <b>Casing Type:</b> PVC <b>Screen Length:</b> 10 FT <b>Top of Screen:</b> 86.39 FT <b>Total Depth:</b> 96.39 FT <b>Initial Depth to Water:</b> 14.12 FT	<b>Pump Type:</b> Geopump <b>Tubing Type:</b> polyethylene <b>Tubing Inner Diameter:</b> 0.125 IN <b>Tubing Length:</b> <b>Pump Intake From TOC:</b> 91 FT <b>Estimated Total Volume Pumped:</b> 3149.999 ML <b>Flow Cell Volume:</b> 90 ML <b>Final Flow Rate:</b> 100 ML_PER_MIN <b>Final Draw Down:</b> 3.03 FT	<b>Instrument Used:</b> SmarTROLL MP <b>Serial Number:</b> 354698
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Weather Conditions:

Sunny

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-07-20 10:46:56	00:00	7.24 pH	24.13 °C	133.33 µS/cm	6.57 mg/L	2.44 NTU	968.1 mV	14.42 ft	120.00 ml/min
2016-07-20 10:51:56	04:59	6.74 pH	20.33 °C	125.85 µS/cm	2.25 mg/L	3.04 NTU	1,041.9 mV	15.51 ft	110.00 ml/min
2016-07-20 10:56:56	10:00	6.70 pH	20.06 °C	123.84 µS/cm	1.82 mg/L	2.92 NTU	1,046.3 mV	16.46 ft	100.00 ml/min
2016-07-20 11:01:56	14:59	6.71 pH	20.37 °C	125.21 µS/cm	1.81 mg/L	2.96 NTU	1,044.7 mV	16.73 ft	100.00 ml/min
2016-07-20 11:06:56	19:59	6.71 pH	20.73 °C	126.02 µS/cm	1.74 mg/L	2.94 NTU	1,045.0 mV	16.88 ft	100.00 ml/min
2016-07-20 11:11:56	24:59	6.71 pH	20.89 °C	123.60 µS/cm	1.62 mg/L	2.65 NTU	1,047.8 mV	17.15 ft	100.00 ml/min
2016-07-20 11:16:56	29:59	6.71 pH	21.04 °C	125.47 µS/cm	1.72 mg/L	2.35 NTU	1,046.5 mV	17.15 ft	100.00 ml/min

## Samples

Sample ID:	Description:
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WGWC-13

Sampled by KJ at 1120 on 7/20/16.

Created using VuSitu from In-Situ, Inc.

# Low-Flow Test Report:

**Test Date / Time:** 2016-07-20 11:43:43

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<b>Location Name: WGWC-14</b> <b>Latitude:</b> <b>Longitude:</b> <b>Well Diameter: 2 IN</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 FT</b> <b>Top of Screen: 44.75 FT</b> <b>Total Depth: 54.75 FT</b> <b>Initial Depth to Water: 14.87 FT</b>	<b>Pump Type: Geopump</b> <b>Tubing Type: polyethylene</b> <b>Tubing Inner Diameter: 0.125 IN</b> <b>Tubing Length:</b> <b>Pump Intake From TOC: 49 FT</b> <b>Estimated Total Volume Pumped: 4298.334 ML</b> <b>Flow Cell Volume: 90 ML</b> <b>Final Flow Rate: 100 ML_PER_MIN</b> <b>Final Draw Down: 1.14 FT</b>	<b>Instrument Used: SmarTROLL MP</b> <b>Serial Number: 354698</b>
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Weather Conditions:

Sunny

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-07-20 11:43:43	00:00	6.52 pH	24.49 °C	113.56 µS/cm	4.90 mg/L	16.80 NTU	1,042.9 mV	15.45 ft	150.00 ml/min
2016-07-20 11:48:43	05:00	6.22 pH	21.37 °C	114.09 µS/cm	1.66 mg/L	11.10 NTU	1,043.0 mV	15.72 ft	100.00 ml/min
2016-07-20 11:53:43	09:59	6.22 pH	21.81 °C	115.18 µS/cm	1.50 mg/L	6.50 NTU	1,044.6 mV	15.87 ft	100.00 ml/min
2016-07-20 11:58:43	14:59	6.22 pH	21.94 °C	114.50 µS/cm	1.50 mg/L	8.85 NTU	1,042.2 mV	15.91 ft	100.00 ml/min
2016-07-20 11:59:12	15:28	6.21 pH	21.93 °C	114.65 µS/cm	1.49 mg/L	8.85 NTU	1,042.5 mV	15.91 ft	100.00 ml/min
2016-07-20 12:04:12	20:29	6.20 pH	21.76 °C	113.44 µS/cm	1.44 mg/L	6.31 NTU	1,050.4 mV	15.91 ft	100.00 ml/min
2016-07-20 12:09:12	25:29	6.22 pH	21.83 °C	114.95 µS/cm	2.95 mg/L	5.89 NTU	1,043.1 mV	15.95 ft	100.00 ml/min
2016-07-20 12:14:12	30:29	6.21 pH	21.84 °C	114.18 µS/cm	1.50 mg/L	5.35 NTU	1,043.0 mV	16.01 ft	100.00 ml/min
2016-07-20 12:19:12	35:29	6.21 pH	21.75 °C	112.97 µS/cm	1.41 mg/L	4.56 NTU	1,045.3 mV	16.01 ft	100.00 ml/min
2016-07-20 12:24:12	40:29	6.21 pH	21.80 °C	113.44 µS/cm	1.37 mg/L	4.44 NTU	1,042.5 mV	16.01 ft	100.00 ml/min

**Samples**

Sample ID:	Description:
WGWC-14	Sampled by KJ at 1230 on 7/20/16.

# Low-Flow Test Report:

**Test Date / Time:** 2016-07-19 14:58:15

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<p><b>Location Name:</b> WGWC-15  <b>Latitude:</b>  <b>Longitude:</b>  <b>Well Diameter:</b> 2 IN  <b>Casing Type:</b> PVC  <b>Screen Length:</b> 10 FT  <b>Top of Screen:</b> 46.6 FT  <b>Total Depth:</b> 56.6 FT  <b>Initial Depth to Water:</b> 8.27 FT</p>	<p><b>Pump Type:</b> Geopump  <b>Tubing Type:</b> polyethylene  <b>Tubing Inner Diameter:</b> 0.125 IN  <b>Tubing Length:</b>  <b>Pump Intake From TOC:</b> 51 FT  <b>Estimated Total Volume Pumped:</b>  <b>6500 ML</b>  <b>Flow Cell Volume:</b> 90 ML  <b>Final Flow Rate:</b> 100 ML_PER_MIN  <b>Final Draw Down:</b> 6.05 FT</p>	<p><b>Instrument Used:</b> SmarTROLL MP  <b>Serial Number:</b> 354698</p>
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Weather Conditions:

Cloudy

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-07-19 14:58:15	00:00	7.92 pH	30.44 °C	227.65 µS/cm	6.84 mg/L	0.28 NTU	1,048.0 mV	8.67 ft	100.00 ml/min
2016-07-19 15:03:15	04:59	7.81 pH	24.56 °C	360.98 µS/cm	1.45 mg/L	0.37 NTU	1,072.5 mV	9.02 ft	100.00 ml/min
2016-07-19 15:08:15	10:00	7.82 pH	23.81 °C	366.21 µS/cm	0.47 mg/L	0.18 NTU	1,085.1 mV	9.76 ft	100.00 ml/min
2016-07-19 15:13:15	15:00	7.81 pH	23.89 °C	365.37 µS/cm	0.44 mg/L	0.64 NTU	1,093.1 mV	10.01 ft	100.00 ml/min
2016-07-19 15:18:15	19:59	7.81 pH	24.14 °C	356.15 µS/cm	0.61 mg/L	0.91 NTU	1,099.1 mV	10.55 ft	100.00 ml/min
2016-07-19 15:23:15	25:00	7.81 pH	24.16 °C	336.89 µS/cm	1.03 mg/L	0.57 NTU	1,104.5 mV	11.00 ft	100.00 ml/min
2016-07-19 15:28:15	30:00	7.82 pH	23.91 °C	318.38 µS/cm	1.82 mg/L	0.57 NTU	1,108.5 mV	11.52 ft	100.00 ml/min
2016-07-19 15:33:15	35:00	7.83 pH	23.78 °C	304.26 µS/cm	2.18 mg/L	1.76 NTU	1,109.5 mV	12.03 ft	100.00 ml/min
2016-07-19 15:38:15	39:59	7.84 pH	24.18 °C	290.29 µS/cm	2.81 mg/L	0.31 NTU	1,109.8 mV	12.59 ft	100.00 ml/min
2016-07-19 15:43:15	45:00	7.85 pH	24.14 °C	285.41 µS/cm	3.32 mg/L	0.19 NTU	1,109.9 mV	13.05 ft	100.00 ml/min

2016-07-19 15:48:15	49:59	7.86 pH	24.00 °C	286.21 µS/cm	3.69 mg/L	0.24 NTU	1,101.8 mV	13.51 ft	100.00 ml/min
2016-07-19 15:53:15	54:59	7.84 pH	24.82 °C	289.84 µS/cm	3.68 mg/L	0.14 NTU	1,091.5 mV	14.10 ft	100.00 ml/min
2016-07-19 15:58:15	01:00:00	7.87 pH	24.21 °C	290.38 µS/cm	3.45 mg/L	0.15 NTU	1,091.5 mV	14.22 ft	100.00 ml/min
2016-07-19 16:03:15	01:05:00	7.88 pH	24.54 °C	298.22 µS/cm	3.50 mg/L	0.26 NTU	1,084.8 mV	14.32 ft	100.00 ml/min

## Samples

Sample ID:	Description:
WGWC-15	Sampled by KJ at 1615 on 7/19/2016

# Low-Flow Test Report:

**Test Date / Time:** 2016-07-18 17:53:12

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<p><b>Location Name: WGWC-16</b>  <b>Latitude:</b>  <b>Longitude:</b>  <b>Well Diameter: 2 IN</b>  <b>Casing Type: PVC</b>  <b>Screen Length: 10 FT</b>  <b>Top of Screen: 25.04 FT</b>  <b>Total Depth: 35.04 FT</b>  <b>Initial Depth to Water: 7.89 FT</b></p>	<p><b>Pump Type:</b>  <b>Tubing Type: polyethylene</b>  <b>Tubing Inner Diameter: 0.125 IN</b>  <b>Tubing Length:</b>  <b>Pump Intake From TOC: 30 FT</b>  <b>Estimated Total Volume Pumped: 6000 ML</b>  <b>Flow Cell Volume: 90 ML</b>  <b>Final Flow Rate: 100 ML_PER_MIN</b>  <b>Final Draw Down: 0 FT</b></p>	<p><b>Instrument Used: SmarTROLL MP</b>  <b>Serial Number: 417056</b></p>
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 0.33	
2016-07-18 17:53:12	00:00	6.11 pH	24.89 °C	942.40 µS/cm	0.97 mg/L	2.24 NTU	673.6 mV	7.89 ft	100.00 ml/min
2016-07-18 17:58:12	04:59	6.10 pH	23.16 °C	953.07 µS/cm	0.42 mg/L	3.48 NTU	636.1 mV	7.89 ft	100.00 ml/min
2016-07-18 18:03:12	09:59	6.10 pH	22.80 °C	949.96 µS/cm	0.32 mg/L	3.51 NTU	705.8 mV	7.89 ft	100.00 ml/min
2016-07-18 18:08:12	15:00	6.10 pH	22.92 °C	942.45 µS/cm	0.27 mg/L	2.72 NTU	708.2 mV	7.89 ft	100.00 ml/min
2016-07-18 18:13:12	19:59	6.09 pH	22.74 °C	961.43 µS/cm	0.21 mg/L	1.15 NTU	618.1 mV	7.89 ft	100.00 ml/min
2016-07-18 18:18:12	25:00	6.08 pH	22.49 °C	1,009.8 µS/cm	0.17 mg/L	1.12 NTU	603.0 mV	7.89 ft	100.00 ml/min
2016-07-18 18:23:12	30:00	6.05 pH	22.33 °C	1,085.1 µS/cm	0.15 mg/L	0.93 NTU	603.4 mV	7.89 ft	100.00 ml/min
2016-07-18 18:28:12	35:00	6.02 pH	22.58 °C	1,143.0 µS/cm	0.14 mg/L	1.30 NTU	606.2 mV	7.89 ft	100.00 ml/min
2016-07-18 18:33:12	40:00	5.99 pH	22.44 °C	1,194.5 µS/cm	0.12 mg/L	1.18 NTU	598.5 mV	7.89 ft	100.00 ml/min
2016-07-18 18:38:12	45:00	5.96 pH	22.18 °C	1,251.4 µS/cm	0.11 mg/L	0.82 NTU	611.9 mV	7.89 ft	100.00 ml/min
2016-07-18 18:43:12	50:00	5.91 pH	22.16 °C	1,303.4 µS/cm	0.10 mg/L	0.77 NTU	637.7 mV	7.89 ft	100.00 ml/min
2016-07-18 18:48:12	54:59	5.88 pH	22.15 °C	1,358.8 µS/cm	0.10 mg/L	0.80 NTU	656.0 mV	7.89 ft	100.00 ml/min

2016-07-18 18:53:12	59:59	5.88 pH	22.64 °C	1,343.8 μS/cm	0.10 mg/L	0.82 NTU	657.0 mV	7.89 ft	100.00 ml/min
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## Samples

Sample ID:	Description:
WGWC-16	

# Low-Flow Test Report:

**Test Date / Time:** 2016-07-20 12:04:09

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<p><b>Location Name:</b> WGWC-17  <b>Latitude:</b>  <b>Longitude:</b>  <b>Well Diameter:</b> 2 IN  <b>Casing Type:</b> PVC  <b>Screen Length:</b> 10 FT  <b>Top of Screen:</b> 87.1 FT  <b>Total Depth:</b> 97.1 FT  <b>Initial Depth to Water:</b> 19.54 FT</p>	<p><b>Pump Type:</b> Peristaltic  <b>Tubing Type:</b> polyethylene  <b>Tubing Inner Diameter:</b> 0.125 IN  <b>Tubing Length:</b>  <b>Pump Intake From TOC:</b> 92.1 FT  <b>Estimated Total Volume Pumped:</b>  <b>4633.333 ML</b>  <b>Flow Cell Volume:</b> 90 ML  <b>Final Flow Rate:</b> 100 ML_PER_MIN  <b>Final Draw Down:</b> 2.11 FT</p>	<p><b>Instrument Used:</b> SmarTROLL MP  <b>Serial Number:</b> 417070</p>
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-07-20 12:04:09	00:00	6.62 pH	22.66 °C	171.86 µS/cm	1.95 mg/L		-36.4 mV	19.54 ft	100.00 ml/min
2016-07-20 12:05:30	01:20	6.65 pH	22.13 °C	177.26 µS/cm	1.47 mg/L		-45.0 mV		100.00 ml/min
2016-07-20 12:10:30	06:21	6.70 pH	21.51 °C	179.65 µS/cm	0.61 mg/L	2.51 NTU	-54.1 mV	20.96 ft	100.00 ml/min
2016-07-20 12:15:30	11:21	6.76 pH	21.64 °C	183.58 µS/cm	0.42 mg/L	7.55 NTU	-64.0 mV	21.22 ft	100.00 ml/min
2016-07-20 12:20:30	16:20	6.82 pH	21.50 °C	184.41 µS/cm	0.36 mg/L	1.76 NTU	-66.1 mV	21.33 ft	100.00 ml/min
2016-07-20 12:25:29	21:20	6.81 pH	22.13 °C	176.78 µS/cm	0.33 mg/L	1.12 NTU	-58.0 mV	21.48 ft	100.00 ml/min
2016-07-20 12:30:29	26:19	6.76 pH	21.89 °C	170.56 µS/cm	0.39 mg/L	4.36 NTU	-46.1 mV	21.62 ft	100.00 ml/min
2016-07-20 12:35:29	31:20	6.74 pH	22.40 °C	164.61 µS/cm	0.50 mg/L	0.89 NTU	-39.5 mV	21.64 ft	100.00 ml/min
2016-07-20 12:40:29	36:20	6.69 pH	22.49 °C	160.11 µS/cm	0.61 mg/L	2.29 NTU	-33.7 mV	21.65 ft	100.00 ml/min
2016-07-20 12:45:29	41:20	6.68 pH	22.40 °C	155.59 µS/cm	0.77 mg/L	3.13 NTU	-29.8 mV	21.65 ft	100.00 ml/min
2016-07-20 12:50:29	46:19	6.66 pH	22.67 °C	153.93 µS/cm	0.85 mg/L	2.94 NTU	-26.1 mV	21.65 ft	100.00 ml/min



**Samples**

Sample ID:	Description:
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Created using VuSitu from In-Situ, Inc.

# Low-Flow Test Report:

**Test Date / Time:** 2016-09-13 10:25:41

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<b>Location Name:</b> WGWA-1 <b>Latitude:</b> <b>Longitude:</b> <b>Well Diameter:</b> 2 IN <b>Casing Type:</b> PVC <b>Screen Length:</b> 10 FT <b>Top of Screen:</b> 30.5 FT <b>Total Depth:</b> 130.59 FT <b>Initial Depth to Water:</b> 30.5 FT	<b>Pump Type:</b> Geopump <b>Tubing Type:</b> polyethylene <b>Tubing Inner Diameter:</b> 0.125 IN <b>Tubing Length:</b> <b>Pump Intake From TOC:</b> 125 FT <b>Estimated Total Volume Pumped:</b> 2998 ML <b>Flow Cell Volume:</b> 90 ML <b>Final Flow Rate:</b> 120 ML_PER_MIN <b>Final Draw Down:</b> 0.02 FT	<b>Instrument Used:</b> SmarTROLL MP <b>Serial Number:</b> 418098
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Weather Conditions:

Cloudy, 80F

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-09-13 10:25:41	00:00	7.13 pH	23.05 °C	42.88 µS/cm	2.51 mg/L	0.98 NTU	145.2 mV	30.51 cm	120.00 ml/min
2016-09-13 10:30:41	04:59	5.44 pH	21.29 °C	32.98 µS/cm	2.65 mg/L	0.97 NTU	184.8 mV	30.52 cm	120.00 ml/min
2016-09-13 10:35:40	09:59	5.27 pH	21.13 °C	32.67 µS/cm	2.94 mg/L	1.40 NTU	189.3 mV	30.52 cm	120.00 ml/min
2016-09-13 10:40:40	14:59	5.25 pH	21.03 °C	32.74 µS/cm	3.06 mg/L	0.43 NTU	177.7 mV	30.52 cm	120.00 ml/min
2016-09-13 10:45:40	19:58	5.25 pH	21.12 °C	32.69 µS/cm	3.09 mg/L	0.17 NTU	166.3 mV	30.52 cm	120.00 ml/min
2016-09-13 10:50:40	24:59	5.22 pH	21.10 °C	32.66 µS/cm	3.01 mg/L	0.12 NTU	161.8 mV	30.52 cm	120.00 ml/min

## Samples

Sample ID:	Description:
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WGWA-1

Sampled at 1055 on 9/13/16 by KJ

Created using VuSitu from In-Situ, Inc.

# Low-Flow Test Report:

**Test Date / Time:** 2016-09-13 13:14:50

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<b>Location Name:</b> WGWA-2 <b>Latitude:</b> <b>Longitude:</b> <b>Well Diameter:</b> 2 IN <b>Casing Type:</b> PVC <b>Screen Length:</b> 10 FT <b>Top of Screen:</b> 93.18 FT <b>Total Depth:</b> 103.18 FT <b>Initial Depth to Water:</b> 16.13 FT	<b>Pump Type:</b> Geopump <b>Tubing Type:</b> polyethylene <b>Tubing Inner Diameter:</b> 0.125 IN <b>Tubing Length:</b> <b>Pump Intake From TOC:</b> 98 FT <b>Estimated Total Volume Pumped:</b> 8249.999 ML <b>Flow Cell Volume:</b> 90 ML <b>Final Flow Rate:</b> 150 ML_PER_MIN <b>Final Draw Down:</b> 0.37 FT	<b>Instrument Used:</b> SmarTROLL MP <b>Serial Number:</b> 418098
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Weather Conditions:

Sunny

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-09-13 13:14:50	00:00	6.22 pH	22.55 °C	122.55 µS/cm	3.09 mg/L	4.61 NTU	335.5 mV	16.53 ft	150.00 ml/min
2016-09-13 13:19:50	04:59	6.24 pH	19.87 °C	127.13 µS/cm	2.30 mg/L	3.36 NTU	259.1 mV	16.55 ft	150.00 ml/min
2016-09-13 13:24:50	09:59	6.22 pH	20.22 °C	124.59 µS/cm	2.01 mg/L	2.90 NTU	152.8 mV	16.50 ft	150.00 ml/min
2016-09-13 13:29:50	14:59	6.21 pH	20.13 °C	124.89 µS/cm	1.71 mg/L	2.93 NTU	127.8 mV	16.48 ft	150.00 ml/min
2016-09-13 13:34:50	19:59	6.22 pH	19.81 °C	126.58 µS/cm	1.50 mg/L	2.31 NTU	108.1 mV	16.50 ft	150.00 ml/min
2016-09-13 13:39:50	24:59	6.21 pH	19.87 °C	126.00 µS/cm	1.38 mg/L	3.15 NTU	100.7 mV	16.50 ft	150.00 ml/min
2016-09-13 13:44:50	30:00	6.20 pH	19.83 °C	126.81 µS/cm	1.24 mg/L	2.30 NTU	84.9 mV	16.50 ft	150.00 ml/min
2016-09-13 13:49:50	34:59	6.23 pH	19.78 °C	128.13 µS/cm	1.01 mg/L	2.69 NTU	86.2 mV	16.50 ft	150.00 ml/min
2016-09-13 13:54:50	39:59	6.23 pH	19.81 °C	129.13 µS/cm	0.96 mg/L	1.94 NTU	74.0 mV	16.50 ft	150.00 ml/min
2016-09-13 13:59:50	44:59	6.25 pH	19.85 °C	135.99 µS/cm	0.83 mg/L	1.62 NTU	60.0 mV	16.50 ft	150.00 ml/min

2016-09-13 14:04:50	49:59	6.30 pH	19.80 °C	141.45 µS/cm	0.74 mg/L	2.05 NTU	59.6 mV	16.50 ft	150.00 ml/min
2016-09-13 14:09:50	54:59	6.30 pH	19.72 °C	140.61 µS/cm	0.78 mg/L	2.41 NTU	57.4 mV	16.50 ft	150.00 ml/min

## Samples

Sample ID:	Description:
WGWA-2	Sampled at 1415 on 9/13/16 by KJ.

# Low-Flow Test Report:

Test Date / Time: 2016-09-13 13:05:34

Project: Wansley

Operator Name: B Hodges/ K Jurinko/T Martinez/C Gargan

<b>Location Name: WGWA-3</b> <b>Latitude:</b> <b>Longitude:</b> <b>Well Diameter: 2 IN</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 FT</b> <b>Top of Screen: 8.9 FT</b> <b>Total Depth: 18.9 FT</b> <b>Initial Depth to Water: 5.11 FT</b>	<b>Pump Type: Peristaltic</b> <b>Tubing Type: polyethylene</b> <b>Tubing Inner Diameter: 0.125 IN</b> <b>Tubing Length:</b> <b>Pump Intake From TOC: 13.9 FT</b> <b>Estimated Total Volume Pumped: 5000 ML</b> <b>Flow Cell Volume: 90 ML</b> <b>Final Flow Rate: 200 ML_PER_MIN</b> <b>Final Draw Down: 0.02 FT</b>	<b>Instrument Used: SmarTROLL MP</b> <b>Serial Number: 416162</b>
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-09-13 13:05:34	00:00	7.99 pH	32.13 °C	30.97 µS/cm	5.43 mg/L		116.7 mV	5.11 ft	200.00 ml/min
2016-09-13 13:10:34	05:00	6.19 pH	21.43 °C	33.38 µS/cm	5.15 mg/L	1.20 NTU	185.5 mV	5.13 ft	200.00 ml/min
2016-09-13 13:15:34	09:59	5.84 pH	20.60 °C	33.46 µS/cm	5.16 mg/L	0.22 NTU	170.4 mV	5.13 ft	200.00 ml/min
2016-09-13 13:20:34	14:59	5.73 pH	20.40 °C	33.70 µS/cm	5.16 mg/L	0.44 NTU	159.6 mV	5.13 ft	200.00 ml/min
2016-09-13 13:25:34	20:00	5.68 pH	20.33 °C	33.40 µS/cm	5.13 mg/L	0.29 NTU	151.4 mV	5.13 ft	200.00 ml/min
2016-09-13 13:30:34	25:00	5.63 pH	20.05 °C	33.33 µS/cm	5.15 mg/L	0.78 NTU	148.3 mV	5.13 ft	200.00 ml/min

## Samples

Sample ID:	Description:
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# Low-Flow Test Report:

Test Date / Time: 2016-09-13 14:57:22

Project: Wansley

Operator Name: B Hodges/ K Jurinko/T Martinez/C Gargan

<b>Location Name: WGWA - 4</b> <b>Latitude:</b> <b>Longitude:</b> <b>Well Diameter: 2 IN</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 FT</b> <b>Top of Screen: 63.25 FT</b> <b>Total Depth: 73.25 FT</b> <b>Initial Depth to Water: 8.35 FT</b>	<b>Pump Type: Peristaltic</b> <b>Tubing Type: polyethylene</b> <b>Tubing Inner Diameter: 0.125 IN</b> <b>Tubing Length:</b> <b>Pump Intake From TOC: 68.25 FT</b> <b>Estimated Total Volume Pumped: 3800.001 ML</b> <b>Flow Cell Volume: 90 ML</b> <b>Final Flow Rate: 200 ML_PER_MIN</b> <b>Final Draw Down: 0.99 FT</b>	<b>Instrument Used: SmarTROLL MP</b> <b>Serial Number: 416162</b>
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-09-13 14:57:22	00:00	6.55 pH	22.37 °C	140.59 µS/cm	0.74 mg/L		-105.9 mV	8.35 ft	160.00 ml/min
2016-09-13 15:02:22	04:59	6.96 pH	20.02 °C	144.71 µS/cm	0.22 mg/L	3.07 NTU	-111.2 mV	8.96 ft	200.00 ml/min
2016-09-13 15:07:22	10:00	7.09 pH	19.71 °C	142.70 µS/cm	0.16 mg/L	0.47 NTU	-105.4 mV	9.16 ft	200.00 ml/min
2016-09-13 15:12:22	14:59	7.11 pH	19.49 °C	142.89 µS/cm	0.14 mg/L	2.13 NTU	-99.1 mV	9.26 ft	200.00 ml/min
2016-09-13 15:17:22	20:00	7.15 pH	19.44 °C	142.29 µS/cm	0.13 mg/L	2.07 NTU	-96.2 mV	9.34 ft	200.00 ml/min

## Samples

Sample ID:	Description:
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# Low-Flow Test Report:

**Test Date / Time:** 2016-09-13 10:10:51

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<p><b>Location Name:</b> WGWA-5  <b>Latitude:</b>  <b>Longitude:</b>  <b>Well Diameter:</b> 2 IN  <b>Casing Type:</b> PVC  <b>Screen Length:</b> 10 FT  <b>Top of Screen:</b> 13.43 FT  <b>Total Depth:</b> 23.43 FT  <b>Initial Depth to Water:</b> 18.37 FT</p>	<p><b>Pump Type:</b> Peristaltic  <b>Tubing Type:</b> polyethylene  <b>Tubing Inner Diameter:</b> 0.125 IN  <b>Tubing Length:</b>  <b>Pump Intake From TOC:</b> 22 FT  <b>Estimated Total Volume Pumped:</b>  <b>9610 ML</b>  <b>Flow Cell Volume:</b> 90 ML  <b>Final Flow Rate:</b> 150 ML_PER_MIN  <b>Final Draw Down:</b> 3.33 FT</p>	<p><b>Instrument Used:</b> SmarTROLL MP  <b>Serial Number:</b> 416162</p>
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-09-13 10:10:51	00:00	7.07 pH	22.71 °C	288.60 µS/cm	1.62 mg/L		-92.3 mV	18.37 ft	150.00 ml/min
2016-09-13 10:15:51	04:59	7.15 pH	19.44 °C	300.65 µS/cm	0.28 mg/L	6.23 NTU	-99.9 mV	18.78 ft	150.00 ml/min
2016-09-13 10:20:51	09:59	6.97 pH	19.29 °C	219.92 µS/cm	0.35 mg/L	5.20 NTU	-40.5 mV	19.38 ft	150.00 ml/min
2016-09-13 10:25:51	14:59	6.62 pH	19.41 °C	200.05 µS/cm	0.36 mg/L	2.62 NTU	0.7 mV	19.81 ft	150.00 ml/min
2016-09-13 10:30:51	19:59	6.70 pH	19.39 °C	250.40 µS/cm	0.27 mg/L	2.41 NTU	-21.2 mV	20.17 ft	150.00 ml/min
2016-09-13 10:35:51	24:59	6.87 pH	19.59 °C	271.33 µS/cm	0.27 mg/L	0.99 NTU	-35.0 mV	20.42 ft	150.00 ml/min
2016-09-13 10:40:51	29:59	6.95 pH	19.56 °C	281.15 µS/cm	0.24 mg/L	1.87 NTU	-44.9 mV	20.75 ft	150.00 ml/min
2016-09-13 10:45:50	34:59	7.07 pH	19.85 °C	294.81 µS/cm	0.23 mg/L	5.09 NTU	-67.4 mV	21.09 ft	150.00 ml/min
2016-09-13 10:50:50	39:58	7.15 pH	20.16 °C	296.66 µS/cm	0.24 mg/L		-80.2 mV	21.09 ft	150.00 ml/min
2016-09-13 10:55:50	44:59	7.19 pH	20.28 °C	295.66 µS/cm	0.27 mg/L		-94.2 mV	21.09 ft	150.00 ml/min
2016-09-13 11:00:50	49:58	7.23 pH	19.62 °C	295.64 µS/cm	0.23 mg/L	9.27 NTU	-103.0 mV	21.70 ft	150.00 ml/min
2016-09-13 11:05:50	54:59	7.29 pH	19.92 °C	295.33 µS/cm	0.20 mg/L	4.92 NTU	-117.1 mV	21.70 ft	150.00 ml/min



**Samples**

Sample ID:	Description:
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Created using VuSitu from In-Situ, Inc.

# Low-Flow Test Report:

Test Date / Time: 2016-09-13 11:43:26

Project: Wansley

Operator Name: B Hodges/ K Jurinko/T Martinez/C Gargan

<b>Location Name: WGWA-6</b> <b>Latitude:</b> <b>Longitude:</b> <b>Well Diameter: 2 IN</b> <b>Casing Type: PVC</b> <b>Screen Length: 10 FT</b> <b>Top of Screen: 92.94 FT</b> <b>Total Depth: 102.94 FT</b> <b>Initial Depth to Water: 18.79 FT</b>	<b>Pump Type: Peristaltic</b> <b>Tubing Type: polyethylene</b> <b>Tubing Inner Diameter: 0.125 IN</b> <b>Tubing Length:</b> <b>Pump Intake From TOC: 97.94 FT</b> <b>Estimated Total Volume Pumped: 4000 ML</b> <b>Flow Cell Volume: 90 ML</b> <b>Final Flow Rate: 180 ML_PER_MIN</b> <b>Final Draw Down: 0.75 FT</b>	<b>Instrument Used: SmarTROLL MP</b> <b>Serial Number: 416162</b>
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-09-13 11:43:26	00:00	7.69 pH	22.12 °C	166.02 µS/cm	1.05 mg/L		-97.2 mV	18.79 ft	160.00 ml/min
2016-09-13 11:48:26	05:00	7.85 pH	20.40 °C	175.15 µS/cm	0.40 mg/L	2.40 NTU	-128.6 mV	19.22 ft	160.00 ml/min
2016-09-13 11:53:26	10:00	7.93 pH	20.60 °C	173.95 µS/cm	0.34 mg/L	1.74 NTU	-133.8 mV	19.35 ft	160.00 ml/min
2016-09-13 11:58:26	15:00	7.95 pH	20.23 °C	175.06 µS/cm	0.28 mg/L	1.46 NTU	-134.0 mV	19.45 ft	160.00 ml/min
2016-09-13 12:03:26	19:59	7.96 pH	20.20 °C	174.54 µS/cm	0.24 mg/L	1.84 NTU	-134.2 mV	19.54 ft	160.00 ml/min

## Samples

Sample ID:	Description:
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# Low-Flow Test Report:

**Test Date / Time:** 2016-09-13 23:57:57

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<p><b>Location Name:</b> WGWA-7 part 1  <b>Latitude:</b>  <b>Longitude:</b>  <b>Well Diameter:</b> 2 IN  <b>Casing Type:</b> PVC  <b>Screen Length:</b> 10 FT  <b>Top of Screen:</b> 29.44 FT  <b>Total Depth:</b> 39.44 FT  <b>Initial Depth to Water:</b></p>	<p><b>Pump Type:</b> Geopump  <b>Tubing Type:</b> polyethylene  <b>Tubing Inner Diameter:</b> 0.125 IN  <b>Tubing Length:</b>  <b>Pump Intake From TOC:</b> 35 FT  <b>Estimated Total Volume Pumped:</b>          6000 ML  <b>Flow Cell Volume:</b> 90 ML  <b>Final Flow Rate:</b> 200 ML_PER_MIN  <b>Final Draw Down:</b> 0.13 FT</p>	<p><b>Instrument Used:</b> SmarTROLL MP  <b>Serial Number:</b> 339100</p>
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-09-13 23:57:57	00:00	7.14 pH	24.42 °C	50.54 µS/cm	5.21 mg/L	2.18 NTU	84.1 mV	30.60 ft	200.00 ml/min
2016-09-14 00:02:57	05:00	5.69 pH	19.99 °C	26.94 µS/cm	6.82 mg/L	4.15 NTU	182.7 mV	30.63 ft	200.00 ml/min
2016-09-14 00:07:57	10:00	5.60 pH	19.72 °C	28.63 µS/cm	6.48 mg/L	1.92 NTU	177.8 mV	30.63 ft	200.00 ml/min
2016-09-14 00:12:57	15:00	5.62 pH	19.54 °C	29.52 µS/cm	6.29 mg/L	0.29 NTU	168.9 mV	30.63 ft	200.00 ml/min
2016-09-14 00:17:57	20:00	5.59 pH	19.67 °C	28.85 µS/cm	6.27 mg/L	0.08 NTU	167.2 mV	30.63 ft	200.00 ml/min
2016-09-14 00:22:57	25:00	5.58 pH	19.55 °C	28.79 µS/cm	6.43 mg/L	0.10 NTU	164.4 mV	30.63 ft	200.00 ml/min
2016-09-14 00:27:57	30:00	5.57 pH	19.59 °C	28.25 µS/cm	6.44 mg/L	0.05 NTU	161.4 mV	30.63 ft	200.00 ml/min

## Samples

Sample ID:	Description:
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WGWA-7	Sampled at 1235 0.05 NTU FD-2(AP) Accidentally finished low flow prior to purging 3 volumes, second set of data in files
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# Low-Flow Test Report:

**Test Date / Time:** 2016-09-14 00:36:14

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<p><b>Location Name:</b> WGWA-7 part 2</p> <p><b>Latitude:</b></p> <p><b>Longitude:</b></p> <p><b>Well Diameter:</b> 2 IN</p> <p><b>Casing Type:</b> PVC</p> <p><b>Screen Length:</b> 10 FT</p> <p><b>Top of Screen:</b> 29.44 FT</p> <p><b>Total Depth:</b> 39.44 FT</p> <p><b>Initial Depth to Water:</b></p>	<p><b>Pump Type:</b> Geopump</p> <p><b>Tubing Type:</b> polyethylene</p> <p><b>Tubing Inner Diameter:</b> 0.125 IN</p> <p><b>Tubing Length:</b></p> <p><b>Pump Intake From TOC:</b> 35 FT</p> <p><b>Estimated Total Volume Pumped:</b> 17000 ML</p> <p><b>Flow Cell Volume:</b> 90 ML</p> <p><b>Final Flow Rate:</b> 200 ML_PER_MIN</p> <p><b>Final Draw Down:</b> 0.11 FT</p>	<p><b>Instrument Used:</b> SmarTROLL MP</p> <p><b>Serial Number:</b> 339100</p>
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-09-14 00:36:14	00:00	5.57 pH	20.82 °C	28.39 µS/cm	6.21 mg/L	0.10 NTU	223.5 mV	30.61 ft	200.00 ml/min
2016-09-14 00:41:14	04:59	5.54 pH	19.41 °C	27.19 µS/cm	6.32 mg/L	0.05 NTU	165.7 mV	30.61 ft	200.00 ml/min
2016-09-14 00:46:14	09:59	5.55 pH	19.62 °C	27.27 µS/cm	6.30 mg/L	0.19 NTU	159.2 mV	30.61 ft	200.00 ml/min
2016-09-14 00:51:14	14:59	5.52 pH	19.40 °C	27.37 µS/cm	6.40 mg/L	0.25 NTU	156.9 mV	30.61 ft	200.00 ml/min
2016-09-14 00:56:14	19:59	5.52 pH	19.43 °C	27.47 µS/cm	6.30 mg/L	0.28 NTU	153.0 mV	30.61 ft	200.00 ml/min
2016-09-14 01:01:14	24:59	5.55 pH	19.49 °C	27.26 µS/cm	6.43 mg/L	0.28 NTU	150.7 mV	30.61 ft	200.00 ml/min
2016-09-14 01:06:14	29:59	5.53 pH	19.66 °C	27.26 µS/cm	6.15 mg/L	0.50 NTU	151.7 mV	30.61 ft	200.00 ml/min
2016-09-14 01:11:14	34:59	5.54 pH	19.95 °C	27.04 µS/cm	6.27 mg/L	0.28 NTU	150.1 mV	30.61 ft	200.00 ml/min
2016-09-14 01:16:14	39:59	5.51 pH	19.87 °C	26.93 µS/cm	6.98 mg/L	0.31 NTU	149.4 mV	30.61 ft	200.00 ml/min
2016-09-14 01:21:14	44:59	5.53 pH	20.08 °C	26.70 µS/cm	6.70 mg/L	0.32 NTU	147.8 mV	30.61 ft	200.00 ml/min
2016-09-14 01:26:13	49:59	5.52 pH	20.08 °C	26.55 µS/cm	6.38 mg/L	0.27 NTU	150.6 mV	30.61 ft	200.00 ml/min
2016-09-14 01:31:13	54:58	5.52 pH	20.39 °C	26.65 µS/cm	6.67 mg/L	0.17 NTU	145.6 mV	30.61 ft	200.00 ml/min

**Samples**

Sample ID:	Description:
WGWA-7	Sampled at 1335 0.17 NTU FD-2(AP) Second data set after purging well for 3 volumes

# Low-Flow Test Report:

**Test Date / Time:** 2016-09-13 22:18:13

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<p><b>Location Name:</b> WGWA-18  <b>Latitude:</b>  <b>Longitude:</b>  <b>Well Diameter:</b> 2 IN  <b>Casing Type:</b> PVC  <b>Screen Length:</b> 10 FT  <b>Top of Screen:</b> 29.59 FT  <b>Total Depth:</b> 39.59 FT  <b>Initial Depth to Water:</b></p>	<p><b>Pump Type:</b> Geopump  <b>Tubing Type:</b> polyethylene  <b>Tubing Inner Diameter:</b> 0.125 IN  <b>Tubing Length:</b>  <b>Pump Intake From TOC:</b> 35 FT  <b>Estimated Total Volume Pumped:</b>  <b>4000 ML</b>  <b>Flow Cell Volume:</b> 90 ML  <b>Final Flow Rate:</b> 100 ML_PER_MIN  <b>Final Draw Down:</b> 2.7 FT</p>	<p><b>Instrument Used:</b> SmarTROLL MP  <b>Serial Number:</b> 339100</p>
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**Test Notes:**

Golder Associates

Groundwater

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**Low-Flow Readings:**

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-09-13 22:18:13	00:00	7.60 pH	22.17 °C	338.43 µS/cm	2.67 mg/L	1.81 NTU	199.6 mV	22.77 ft	100.00 ml/min
2016-09-13 22:23:13	04:59	7.76 pH	20.21 °C	249.30 µS/cm	0.97 mg/L	1.44 NTU	102.0 mV	23.14 ft	100.00 ml/min
2016-09-13 22:28:12	09:59	7.76 pH	19.54 °C	242.58 µS/cm	0.47 mg/L	2.75 NTU	72.9 mV	23.55 ft	100.00 ml/min
2016-09-13 22:33:12	14:58	7.64 pH	19.44 °C	234.00 µS/cm	0.64 mg/L	2.02 NTU	73.8 mV	23.97 ft	100.00 ml/min
2016-09-13 22:38:12	19:59	7.50 pH	19.41 °C	226.50 µS/cm	0.85 mg/L	0.92 NTU	-1.2 mV	24.35 ft	100.00 ml/min
2016-09-13 22:43:12	24:58	7.35 pH	19.50 °C	221.96 µS/cm	0.80 mg/L	0.67 NTU	-62.5 mV	24.59 ft	100.00 ml/min
2016-09-13 22:48:12	29:59	7.26 pH	19.41 °C	218.97 µS/cm	0.63 mg/L	0.43 NTU	-75.4 mV	24.75 ft	100.00 ml/min
2016-09-13 22:53:12	34:59	7.22 pH	19.45 °C	217.99 µS/cm	0.60 mg/L	0.23 NTU	-76.3 mV	24.90 ft	100.00 ml/min
2016-09-13 22:58:12	39:58	7.18 pH	19.51 °C	213.97 µS/cm	0.56 mg/L	0.06 NTU	-78.1 mV	24.96 ft	100.00 ml/min

**Samples**

Sample ID:	Description:
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WGWA-18	Sampled @ 1100 0.06 NTU
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# Low-Flow Test Report:

**Test Date / Time:** 2016-09-15 09:16:00

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<b>Location Name:</b> WGWC-8 <b>Latitude:</b> <b>Longitude:</b> <b>Well Diameter:</b> 2 IN <b>Casing Type:</b> PVC <b>Screen Length:</b> 10 FT <b>Top of Screen:</b> 49.5 FT <b>Total Depth:</b> 59.5 FT <b>Initial Depth to Water:</b> 5.94 FT	<b>Pump Type:</b> Geopump <b>Tubing Type:</b> polyethylene <b>Tubing Inner Diameter:</b> 0.125 IN <b>Tubing Length:</b> <b>Pump Intake From TOC:</b> 54 FT <b>Estimated Total Volume Pumped:</b> 3549.999 ML <b>Flow Cell Volume:</b> 90 ML <b>Final Flow Rate:</b> 120 ML_PER_MIN <b>Final Draw Down:</b> 1.73 FT	<b>Instrument Used:</b> SmarTROLL MP <b>Serial Number:</b> 418098
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Weather Conditions:

Sunny

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 0.3	
2016-09-15 09:16:00	00:00	7.17 pH	21.81 °C	478.42 µS/cm	3.28 mg/L	0.30 NTU	192.3 mV	6.64 ft	200.00 ml/min
2016-09-15 09:21:00	04:59	6.51 pH	20.78 °C	460.62 µS/cm	1.50 mg/L	1.07 NTU	114.6 mV	6.96 ft	150.00 ml/min
2016-09-15 09:26:00	09:59	6.41 pH	21.02 °C	457.34 µS/cm	1.37 mg/L	0.09 NTU	97.3 mV	7.21 ft	120.00 ml/min
2016-09-15 09:31:00	14:59	6.39 pH	21.11 °C	455.61 µS/cm	1.30 mg/L	0.96 NTU	89.1 mV	7.42 ft	120.00 ml/min
2016-09-15 09:36:00	19:59	6.37 pH	21.31 °C	445.00 µS/cm	1.33 mg/L	0.05 NTU	87.2 mV	7.52 ft	120.00 ml/min
2016-09-15 09:41:00	24:59	6.38 pH	21.51 °C	451.92 µS/cm	1.29 mg/L	1.41 NTU	90.9 mV	7.67 ft	120.00 ml/min

## Samples

Sample ID:	Description:
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WGWC-8

Sampled at 0945 on 9/15/16 by KJ.

Created using VuSitu from In-Situ, Inc.

# Low-Flow Test Report:

**Test Date / Time:** 2016-09-14 12:12:28

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<p><b>Location Name:</b> WGWC-9  <b>Latitude:</b>  <b>Longitude:</b>  <b>Well Diameter:</b> 2 IN  <b>Casing Type:</b> PVC  <b>Screen Length:</b> 10 FT  <b>Top of Screen:</b> 50.9 FT  <b>Total Depth:</b> 60.9 FT  <b>Initial Depth to Water:</b> 12.64 FT</p>	<p><b>Pump Type:</b> Peristaltic  <b>Tubing Type:</b> polyethylene  <b>Tubing Inner Diameter:</b> 0.125 IN  <b>Tubing Length:</b>  <b>Pump Intake From TOC:</b> 55.9 FT  <b>Estimated Total Volume Pumped:</b>  <b>3499.999 ML</b>  <b>Flow Cell Volume:</b> 90 ML  <b>Final Flow Rate:</b> 100 ML_PER_MIN  <b>Final Draw Down:</b> 2.74 FT</p>	<p><b>Instrument Used:</b> SmarTROLL MP  <b>Serial Number:</b> 416162</p>
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**Test Notes:**

Golder Associates

Groundwater

Lamotte 2020

**Low-Flow Readings:**

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-09-14 12:12:28	00:00	7.09 pH	28.20 °C	144.33 µS/cm	4.14 mg/L		132.8 mV	12.64 ft	100.00 ml/min
2016-09-14 12:17:28	04:59	6.62 pH	24.90 °C	148.73 µS/cm	2.86 mg/L	3.44 NTU	97.0 mV	13.71 ft	100.00 ml/min
2016-09-14 12:22:28	09:59	6.53 pH	24.78 °C	148.73 µS/cm	2.87 mg/L	1.55 NTU	90.1 mV	14.16 ft	100.00 ml/min
2016-09-14 12:27:28	14:59	6.49 pH	24.89 °C	150.44 µS/cm	2.70 mg/L	3.45 NTU	87.2 mV	14.52 ft	100.00 ml/min
2016-09-14 12:32:28	19:59	6.45 pH	24.68 °C	153.25 µS/cm	2.36 mg/L	4.73 NTU	85.8 mV	14.82 ft	100.00 ml/min
2016-09-14 12:37:28	24:59	6.38 pH	25.15 °C	153.33 µS/cm	1.95 mg/L	3.66 NTU	90.0 mV	15.08 ft	100.00 ml/min
2016-09-14 12:42:28	29:59	6.35 pH	25.68 °C	149.15 µS/cm	1.71 mg/L	3.16 NTU	87.4 mV	15.20 ft	100.00 ml/min
2016-09-14 12:47:28	34:59	6.33 pH	25.31 °C	151.37 µS/cm	1.66 mg/L	3.86 NTU	85.4 mV	15.38 ft	100.00 ml/min

**Samples**

Sample ID:	Description:
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# Low-Flow Test Report:

**Test Date / Time:** 2016-09-14 14:28:51

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<p><b>Location Name: WGWC-10</b>  <b>Latitude:</b>  <b>Longitude:</b>  <b>Well Diameter: 2 IN</b>  <b>Casing Type: PVC</b>  <b>Screen Length: 10 FT</b>  <b>Top of Screen: 137.16 FT</b>  <b>Total Depth: 147.16 FT</b>  <b>Initial Depth to Water:</b></p>	<p><b>Pump Type: Geopump</b>  <b>Tubing Type: polyethylene</b>  <b>Tubing Inner Diameter: 0.125 IN</b>  <b>Tubing Length:</b>  <b>Pump Intake From TOC: 142 FT</b>  <b>Estimated Total Volume Pumped: 4000 ML</b>  <b>Flow Cell Volume: 90 ML</b>  <b>Final Flow Rate: 100 ML_PER_MIN</b>  <b>Final Draw Down: 3.04 FT</b></p>	<p><b>Instrument Used: SmarTROLL MP</b>  <b>Serial Number: 339100</b></p>
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**Test Notes:**

Golder Associates

Groundwater

Lamotte 2020

**Low-Flow Readings:**

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-09-14 14:28:51	00:00	7.30 pH	29.60 °C	92.38 µS/cm	4.82 mg/L	0.78 NTU	85.3 mV	19.20 ft	100.00 ml/min
2016-09-14 14:33:51	05:00	7.17 pH	21.66 °C	88.84 µS/cm	5.88 mg/L	4.06 NTU	67.9 mV	20.25 ft	100.00 ml/min
2016-09-14 14:38:51	09:59	7.21 pH	21.37 °C	88.90 µS/cm	5.73 mg/L	1.82 NTU	66.7 mV	20.81 ft	100.00 ml/min
2016-09-14 14:43:51	14:59	7.22 pH	21.35 °C	89.15 µS/cm	5.68 mg/L	2.24 NTU	64.6 mV	21.26 ft	100.00 ml/min
2016-09-14 14:48:51	19:59	7.23 pH	21.34 °C	88.62 µS/cm	5.61 mg/L	0.92 NTU	63.9 mV	21.67 ft	100.00 ml/min
2016-09-14 14:53:51	24:59	7.22 pH	21.55 °C	88.22 µS/cm	5.60 mg/L	0.72 NTU	63.2 mV	21.94 ft	100.00 ml/min
2016-09-14 14:58:51	30:00	7.22 pH	21.73 °C	87.93 µS/cm	5.58 mg/L	0.69 NTU	64.0 mV	22.15 ft	100.00 ml/min
2016-09-14 15:03:51	34:59	7.23 pH	21.71 °C	87.56 µS/cm	5.54 mg/L	0.58 NTU	64.0 mV	22.30 ft	100.00 ml/min
2016-09-14 15:08:51	40:00	7.22 pH	21.95 °C	87.56 µS/cm	5.49 mg/L	2.01 NTU	62.9 mV	22.39 ft	100.00 ml/min

**Samples**

Sample ID:	Description:
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WGWC-10	Sampled at 1510 2.01 NTU
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# Low-Flow Test Report:

**Test Date / Time:** 2016-08-31 23:50:12

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<p><b>Location Name:</b> WGWC-11  <b>Latitude:</b>  <b>Longitude:</b>  <b>Well Diameter:</b> 2 IN  <b>Casing Type:</b> PVC  <b>Screen Length:</b> 10 FT  <b>Top of Screen:</b> 40.28 FT  <b>Total Depth:</b> 50.28 FT  <b>Initial Depth to Water:</b></p>	<p><b>Pump Type:</b> Geopump  <b>Tubing Type:</b> polyethylene  <b>Tubing Inner Diameter:</b> 0.125 IN  <b>Tubing Length:</b>  <b>Pump Intake From TOC:</b> 45 FT  <b>Estimated Total Volume Pumped:</b>  <b>3200 ML</b>  <b>Flow Cell Volume:</b> 90 ML  <b>Final Flow Rate:</b> 80 ML_PER_MIN  <b>Final Draw Down:</b> 1.4 FT</p>	<p><b>Instrument Used:</b> SmarTROLL MP  <b>Serial Number:</b> 339100</p>
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-08-31 23:50:12	00:00	6.95 pH	23.60 °C	49.13 µS/cm	8.20 mg/L	1.89 NTU	171.1 mV	29.62 ft	80.00 ml/min
2016-08-31 23:55:12	04:59	6.07 pH	20.39 °C	39.62 µS/cm	6.76 mg/L	2.31 NTU	143.9 mV	29.85 ft	80.00 ml/min
2016-09-01 00:00:12	09:59	5.99 pH	20.50 °C	39.50 µS/cm	7.05 mg/L	1.86 NTU	142.3 mV	30.03 ft	80.00 ml/min
2016-09-01 00:05:12	14:59	5.96 pH	20.53 °C	39.12 µS/cm	7.07 mg/L	1.18 NTU	139.9 mV	30.09 ft	80.00 ml/min
2016-09-01 00:10:12	19:59	5.96 pH	20.84 °C	38.93 µS/cm	7.04 mg/L	0.93 NTU	137.9 mV	30.10 ft	80.00 ml/min
2016-09-01 00:15:12	24:59	5.92 pH	20.88 °C	40.09 µS/cm	7.02 mg/L	0.45 NTU	138.0 mV	30.07 ft	80.00 ml/min
2016-09-01 00:20:12	29:59	5.87 pH	20.13 °C	38.88 µS/cm	7.61 mg/L	0.18 NTU	138.3 mV	30.25 ft	80.00 ml/min
2016-09-01 00:25:12	34:59	5.94 pH	20.23 °C	39.26 µS/cm	7.32 mg/L	0.31 NTU	132.8 mV	30.40 ft	80.00 ml/min
2016-09-01 00:30:12	39:59	5.94 pH	20.39 °C	39.99 µS/cm	7.17 mg/L	0.21 NTU	132.6 mV	30.49 ft	80.00 ml/min

## Samples

Sample ID:	Description:
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WGWC-11	Sampled at 1030 0.21 NTU
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Created using VuSitu from In-Situ, Inc.



# Low-Flow Test Report:

**Test Date / Time:** 2016-09-01 02:20:42

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<p><b>Location Name:</b> WGWC-12  <b>Latitude:</b>  <b>Longitude:</b>  <b>Well Diameter:</b> 2 IN  <b>Casing Type:</b> PVC  <b>Screen Length:</b> 10 FT  <b>Top of Screen:</b> 66.78 FT  <b>Total Depth:</b> 76.78 FT  <b>Initial Depth to Water:</b></p>	<p><b>Pump Type:</b> Geopump  <b>Tubing Type:</b> polyethylene  <b>Tubing Inner Diameter:</b> 0.125 IN  <b>Tubing Length:</b>  <b>Pump Intake From TOC:</b> 71 FT  <b>Estimated Total Volume Pumped:</b>  <b>3000 ML</b>  <b>Flow Cell Volume:</b> 90 ML  <b>Final Flow Rate:</b> 100 ML_PER_MIN  <b>Final Draw Down:</b> 0.23 FT</p>	<p><b>Instrument Used:</b> SmarTROLL MP  <b>Serial Number:</b> 339100</p>
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**Test Notes:**

Golder Associates

Groundwater

Lamotte 2020

**Low-Flow Readings:**

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-09-01 02:20:42	00:00	6.35 pH	31.17 °C	113.10 µS/cm	6.52 mg/L	1.73 NTU	133.0 mV	28.55 ft	100.00 ml/min
2016-09-01 02:25:42	04:59	6.77 pH	22.42 °C	136.03 µS/cm	2.85 mg/L	3.01 NTU	89.6 mV	28.55 ft	100.00 ml/min
2016-09-01 02:30:42	10:00	6.88 pH	21.55 °C	143.88 µS/cm	1.37 mg/L	1.46 NTU	70.2 mV	28.55 ft	100.00 ml/min
2016-09-01 02:35:42	15:00	6.92 pH	20.97 °C	146.61 µS/cm	0.89 mg/L	0.92 NTU	63.4 mV	28.55 ft	100.00 ml/min
2016-09-01 02:40:42	19:59	6.93 pH	20.92 °C	144.86 µS/cm	0.83 mg/L	0.77 NTU	51.6 mV	28.55 ft	100.00 ml/min
2016-09-01 02:45:42	25:00	6.93 pH	20.92 °C	144.98 µS/cm	1.01 mg/L	0.66 NTU	44.9 mV	28.55 ft	100.00 ml/min
2016-09-01 02:50:42	30:00	6.96 pH	20.92 °C	143.56 µS/cm	0.73 mg/L	0.58 NTU	38.8 mV	28.55 ft	100.00 ml/min

**Samples**

Sample ID:	Description:
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WGWC-12	Sampled at 1250 0.58 NTU 2nd radium bottle
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# Low-Flow Test Report:

**Test Date / Time:** 2016-09-14 11:51:05

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<p><b>Location Name:</b> WGWC-13  <b>Latitude:</b>  <b>Longitude:</b>  <b>Well Diameter:</b> 2 IN  <b>Casing Type:</b> PVC  <b>Screen Length:</b> 10 FT  <b>Top of Screen:</b> 86.31 FT  <b>Total Depth:</b> 96.31 FT  <b>Initial Depth to Water:</b> 14.81 FT</p>	<p><b>Pump Type:</b> Geopump  <b>Tubing Type:</b> polyethylene  <b>Tubing Inner Diameter:</b> 0.125 IN  <b>Tubing Length:</b>  <b>Pump Intake From TOC:</b> 91 FT  <b>Estimated Total Volume Pumped:</b>  <b>3998.333 ML</b>  <b>Flow Cell Volume:</b> 90 ML  <b>Final Flow Rate:</b> 100 ML_PER_MIN  <b>Final Draw Down:</b> 2.85 FT</p>	<p><b>Instrument Used:</b> SmarTROLL MP  <b>Serial Number:</b> 418098</p>
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Weather Conditions:

Sunny

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 0.3	
2016-09-14 11:51:05	00:00	8.00 pH	24.56 °C	95.67 µS/cm	6.69 mg/L	3.88 NTU	146.8 mV	15.49 ft	100.00 ml/min
2016-09-14 11:56:05	04:59	7.24 pH	20.44 °C	175.80 µS/cm	1.79 mg/L	2.48 NTU	47.1 mV	16.23 ft	100.00 ml/min
2016-09-14 12:01:05	10:00	7.10 pH	20.50 °C	157.20 µS/cm	0.76 mg/L	3.03 NTU	55.4 mV	16.52 ft	100.00 ml/min
2016-09-14 12:06:05	15:00	6.99 pH	20.57 °C	139.32 µS/cm	0.79 mg/L	3.83 NTU	59.6 mV	16.81 ft	100.00 ml/min
2016-09-14 12:11:05	20:00	6.90 pH	20.58 °C	127.21 µS/cm	0.93 mg/L	2.92 NTU	62.5 mV	17.23 ft	100.00 ml/min
2016-09-14 12:16:05	24:59	6.82 pH	20.34 °C	116.01 µS/cm	1.20 mg/L	2.64 NTU	68.3 mV	17.35 ft	100.00 ml/min
2016-09-14 12:21:05	29:59	6.74 pH	20.67 °C	112.25 µS/cm	1.36 mg/L	3.35 NTU	70.1 mV	17.60 ft	100.00 ml/min
2016-09-14 12:26:05	34:59	6.71 pH	20.55 °C	110.67 µS/cm	1.42 mg/L	3.64 NTU	68.3 mV	17.64 ft	100.00 ml/min
2016-09-14 12:31:04	39:59	6.70 pH	20.85 °C	110.00 µS/cm	1.41 mg/L	3.28 NTU	65.1 mV	17.66 ft	100.00 ml/min

**Samples**

Sample ID:	Description:
WGWC-13	Sampled by KJ at 1235 on 9/14/16

# Low-Flow Test Report:

**Test Date / Time:** 2016-09-15 00:00:16

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<b>Location Name:</b> WGWC-14 <b>Latitude:</b> 0 <b>Longitude:</b> 0 <b>Well Diameter:</b> 2 CM <b>Casing Type:</b> PVC <b>Screen Length:</b> 10 FT <b>Top of Screen:</b> 44.78 FT <b>Total Depth:</b> 54.78 FT <b>Initial Depth to Water:</b> 15.04 FT	<b>Pump Type:</b> Geopump <b>Tubing Type:</b> polyethylene <b>Tubing Inner Diameter:</b> 0.125 IN <b>Tubing Length:</b> <b>Pump Intake From TOC:</b> 50 FT <b>Estimated Total Volume Pumped:</b> 4498.333 ML <b>Flow Cell Volume:</b> 90 ML <b>Final Flow Rate:</b> 100 ML_PER_MIN <b>Final Draw Down:</b> 0.7 FT	<b>Instrument Used:</b> SmarTROLL MP <b>Serial Number:</b> 448902
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Weather Conditions:

Sunny

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 0.33	
2016-09-15 00:00:16	00:00	6.42 pH	21.37 °C	96.72 µS/cm	3.38 mg/L	11.57 NTU	101.3 mV	15.04 ft	100.00 ml/min
2016-09-15 00:05:16	04:59	6.31 pH	20.49 °C	96.73 µS/cm	2.75 mg/L	9.09 NTU	70.6 mV	15.70 ft	100.00 ml/min
2016-09-15 00:10:16	09:59	6.29 pH	20.55 °C	98.73 µS/cm	1.82 mg/L	15.00 NTU	63.9 mV	15.74 ft	100.00 ml/min
2016-09-15 00:15:16	15:00	6.27 pH	21.24 °C	97.02 µS/cm	1.84 mg/L	13.20 NTU	62.7 mV	15.74 ft	100.00 ml/min
2016-09-15 00:20:16	20:00	6.27 pH	21.51 °C	97.14 µS/cm	1.76 mg/L	9.02 NTU	62.6 mV	15.74 ft	100.00 ml/min
2016-09-15 00:25:16	24:59	6.26 pH	21.29 °C	96.13 µS/cm	1.74 mg/L	8.71 NTU	61.7 mV	15.74 ft	100.00 ml/min
2016-09-15 00:30:15	29:59	6.26 pH	21.49 °C	96.23 µS/cm	1.72 mg/L	7.76 NTU	61.5 mV	15.74 ft	100.00 ml/min
2016-09-15 00:35:15	34:59	6.26 pH	20.97 °C	95.17 µS/cm	1.72 mg/L	6.31 NTU	62.3 mV	15.74 ft	100.00 ml/min
2016-09-15 00:40:15	39:59	6.25 pH	21.10 °C	95.76 µS/cm	1.70 mg/L	5.95 NTU	60.6 mV	15.74 ft	100.00 ml/min

2016-09-15 00:45:15	44:59	6.25 pH	21.24 °C	95.82 µS/cm	1.69 mg/L	3.08 NTU	60.7 mV	15.74 ft	100.00 ml/min
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## Samples

Sample ID:	Description:
WGWC-14	

# Low-Flow Test Report:

**Test Date / Time:** 2016-09-14 09:33:23

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<b>Location Name:</b> WGWC-15 <b>Latitude:</b> <b>Longitude:</b> <b>Well Diameter:</b> 2 IN <b>Casing Type:</b> PVC <b>Screen Length:</b> 10 FT <b>Top of Screen:</b> 46.55 FT <b>Total Depth:</b> 56.55 FT <b>Initial Depth to Water:</b> 8.7 FT	<b>Pump Type:</b> Geopump <b>Tubing Type:</b> polyethylene <b>Tubing Inner Diameter:</b> 0.125 IN <b>Tubing Length:</b> <b>Pump Intake From TOC:</b> 51 FT <b>Estimated Total Volume Pumped:</b> 5000 ML <b>Flow Cell Volume:</b> 90 ML <b>Final Flow Rate:</b> 100 ML_PER_MIN <b>Final Draw Down:</b> 4.88 FT	<b>Instrument Used:</b> SmarTROLL MP <b>Serial Number:</b> 418098
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Weather Conditions:

Sunny

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-09-14 09:33:23	00:00	7.63 pH	24.28 °C	370.44 µS/cm	6.84 mg/L	0.34 NTU	180.3 mV	8.70 ft	100.00 ml/min
2016-09-14 09:38:23	04:59	7.70 pH	22.54 °C	410.83 µS/cm	0.57 mg/L	0.03 NTU	-109.3 mV	9.89 ft	100.00 ml/min
2016-09-14 09:43:23	09:59	7.76 pH	23.01 °C	405.36 µS/cm	0.44 mg/L	0.29 NTU	-116.0 mV	10.50 ft	100.00 ml/min
2016-09-14 09:48:23	14:59	7.79 pH	23.15 °C	398.32 µS/cm	0.35 mg/L	2.02 NTU	-117.8 mV	10.95 ft	100.00 ml/min
2016-09-14 09:53:23	19:59	7.81 pH	23.18 °C	393.35 µS/cm	0.29 mg/L	1.68 NTU	-118.5 mV	11.27 ft	100.00 ml/min
2016-09-14 09:58:23	24:59	7.81 pH	23.08 °C	392.50 µS/cm	0.36 mg/L	2.95 NTU	-107.5 mV	11.72 ft	100.00 ml/min
2016-09-14 10:03:23	30:00	7.81 pH	23.22 °C	386.32 µS/cm	0.54 mg/L	0.09 NTU	-93.6 mV	12.29 ft	100.00 ml/min
2016-09-14 10:08:23	34:59	7.79 pH	23.24 °C	388.04 µS/cm	0.59 mg/L	4.69 NTU	-77.9 mV	12.64 ft	100.00 ml/min
2016-09-14 10:13:23	39:59	7.79 pH	23.08 °C	394.25 µS/cm	0.68 mg/L	0.23 NTU	-59.4 mV	13.26 ft	100.00 ml/min
2016-09-14 10:18:23	44:59	7.79 pH	23.39 °C	393.44 µS/cm	0.85 mg/L	0.02 NTU	-52.6 mV	13.33 ft	100.00 ml/min

2016-09-14 10:23:23	49:59	7.79 pH	23.69 °C	394.51 µS/cm	0.83 mg/L	0.03 NTU	-53.8 mV	13.58 ft	100.00 ml/min
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## Samples

Sample ID:	Description:
WGWC-15	Sampled at 1027 on 9/14/16 by KJ



# Low-Flow Test Report:

**Test Date / Time:** 2016-09-14 21:44:43

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<b>Location Name:</b> WGWC-16 <b>Latitude:</b> <b>Longitude:</b> <b>Well Diameter:</b> 2 IN <b>Casing Type:</b> PVC <b>Screen Length:</b> 10 FT <b>Top of Screen:</b> 25.04 FT <b>Total Depth:</b> 35.04 FT <b>Initial Depth to Water:</b> 8.7 FT	<b>Pump Type:</b> Geopump <b>Tubing Type:</b> polyethylene <b>Tubing Inner Diameter:</b> 0.125 IN <b>Tubing Length:</b> <b>Pump Intake From TOC:</b> 30 FT <b>Estimated Total Volume Pumped:</b> 3999.999 ML <b>Flow Cell Volume:</b> 90 ML <b>Final Flow Rate:</b> 100 ML_PER_MIN <b>Final Draw Down:</b> 0 FT	<b>Instrument Used:</b> SmarTROLL MP <b>Serial Number:</b> 448902
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Weather Conditions:

Sunny

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 0.333	
2016-09-14 21:44:43	00:00	6.68 pH	23.02 °C	663.98 µS/cm	2.52 mg/L	7.57 NTU	137.2 mV	8.70 ft	100.00 ml/min
2016-09-14 21:49:43	04:59	6.34 pH	22.84 °C	720.14 µS/cm	2.32 mg/L	5.90 NTU	84.6 mV	8.70 ft	100.00 ml/min
2016-09-14 21:54:43	09:59	6.19 pH	22.93 °C	974.92 µS/cm	2.04 mg/L	4.40 NTU	67.6 mV	8.70 ft	100.00 ml/min
2016-09-14 21:59:43	15:00	6.10 pH	22.81 °C	1,182.3 µS/cm	1.87 mg/L	2.38 NTU	63.4 mV	8.70 ft	100.00 ml/min
2016-09-14 22:04:43	19:59	6.05 pH	22.85 °C	1,284.7 µS/cm	1.82 mg/L	1.83 NTU	62.0 mV	8.70 ft	100.00 ml/min
2016-09-14 22:09:43	24:59	5.99 pH	22.81 °C	1,383.1 µS/cm	1.71 mg/L	2.58 NTU	61.3 mV	8.70 ft	100.00 ml/min
2016-09-14 22:14:43	29:59	5.94 pH	22.68 °C	1,427.3 µS/cm	1.56 mg/L	0.61 NTU	61.9 mV	8.70 ft	100.00 ml/min
2016-09-14 22:19:43	34:59	5.89 pH	22.94 °C	1,459.5 µS/cm	1.53 mg/L	2.04 NTU	62.4 mV	8.70 ft	100.00 ml/min
2016-09-14 22:24:43	39:59	5.89 pH	22.96 °C	1,450.2 µS/cm	1.55 mg/L	1.76 NTU	61.3 mV	8.70 ft	100.00 ml/min

**Samples**

Sample ID:	Description:
WGWC-16	Sampled 9/14/16 1030 CG

# Low-Flow Test Report:

**Test Date / Time:** 2016-09-14 10:13:42

**Project:** Wansley

**Operator Name:** B Hodges/ K Jurinko/T Martinez/C Gargan

<b>Location Name:</b> WGWC-17 <b>Latitude:</b> <b>Longitude:</b> <b>Well Diameter:</b> 2 IN <b>Casing Type:</b> PVC <b>Screen Length:</b> 10 FT <b>Top of Screen:</b> 86.16 FT <b>Total Depth:</b> 96.16 FT <b>Initial Depth to Water:</b> 20.26 FT	<b>Pump Type:</b> Peristaltic <b>Tubing Type:</b> polyethylene <b>Tubing Inner Diameter:</b> 0.125 IN <b>Tubing Length:</b> <b>Pump Intake From TOC:</b> 91.16 FT <b>Estimated Total Volume Pumped:</b> <b>4498.333 ML</b> <b>Flow Cell Volume:</b> 90 ML <b>Final Flow Rate:</b> 100 ML_PER_MIN <b>Final Draw Down:</b> 1.75 FT	<b>Instrument Used:</b> SmarTROLL MP <b>Serial Number:</b> 416162
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## Test Notes:

Golder Associates

Groundwater

Lamotte 2020

## Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 10 %	+/- 5 %	+/- 10 %	+/- 5	+/- 10 %	+/- 5	
2016-09-14 10:13:42	00:00	7.86 pH	26.17 °C	102.47 µS/cm	7.13 mg/L		76.8 mV	20.26 ft	100.00 ml/min
2016-09-14 10:18:42	04:59	6.58 pH	20.87 °C	133.17 µS/cm	2.45 mg/L	9.03 NTU	25.2 mV	20.98 ft	100.00 ml/min
2016-09-14 10:23:42	09:59	6.58 pH	20.33 °C	137.25 µS/cm	0.97 mg/L	6.28 NTU	19.0 mV	21.41 ft	100.00 ml/min
2016-09-14 10:28:41	14:58	6.58 pH	20.42 °C	138.99 µS/cm	0.62 mg/L	9.03 NTU	15.1 mV	21.62 ft	100.00 ml/min
2016-09-14 10:33:41	19:58	6.62 pH	20.47 °C	138.78 µS/cm	0.51 mg/L	7.64 NTU	14.2 mV	21.76 ft	100.00 ml/min
2016-09-14 10:38:41	24:58	6.58 pH	20.51 °C	133.50 µS/cm	0.49 mg/L	9.30 NTU	28.9 mV	21.87 ft	100.00 ml/min
2016-09-14 10:43:41	29:59	6.59 pH	20.44 °C	144.66 µS/cm	0.47 mg/L	7.41 NTU	10.4 mV	21.92 ft	100.00 ml/min
2016-09-14 10:48:41	34:58	6.67 pH	20.42 °C	146.92 µS/cm	0.51 mg/L	6.31 NTU	1.5 mV	21.98 ft	100.00 ml/min
2016-09-14 10:53:41	39:59	6.70 pH	20.51 °C	146.14 µS/cm	0.60 mg/L	1.99 NTU	-2.8 mV	21.99 ft	100.00 ml/min
2016-09-14 10:58:41	44:58	6.70 pH	20.44 °C	142.42 µS/cm	0.71 mg/L	3.13 NTU	1.5 mV	22.01 ft	100.00 ml/min

**Samples**

Sample ID:	Description:
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Created using VuSitu from In-Situ, Inc.

Product Name: Low-Flow System

Date: 2016-11-09 12:39:12

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC  
Site Name Plant Wansley - AP  
Latitude 33° 24' 38.21"  
Longitude -85° -2' -9.39"  
Sonde SN 440279  
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.25 in  
Tubing Length 132.6 ft

Pump placement from TOC 124.6 ft

Well Information:

Well ID WGWA-1  
Well diameter 2 in  
Well Total Depth 129.6 ft  
Screen Length 10 ft  
Depth to Water 31.74 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.759952 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.01 in  
Total Volume Pumped 5.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 50
Last 5	12:15:36	900.02	19.06	5.75	35.73	0.51	31.74	2.15	75.44
Last 5	12:20:36	1200.02	18.93	5.63	35.62	0.97	31.74	1.88	81.40
Last 5	12:25:36	1500.02	18.95	5.61	35.85	0.64	31.75	2.39	85.84
Last 5	12:30:36	1800.02	19.10	5.58	35.99	0.50	31.75	2.42	90.14
Last 5	12:35:36	2100.02	19.33	5.57	35.96	1.00	31.75	2.34	94.31
Variance 0			0.01	-0.01	0.23			0.51	4.44
Variance 1			0.15	-0.03	0.14			0.03	4.30
Variance 2			0.22	-0.01	-0.03			-0.08	4.17

Notes

Weather: 68°F Clear

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-09 11:08:28

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC  
Site Name Plant Wansley - AP  
Latitude 33° 24' 38.21"  
Longitude -85° -2' -9.39"  
Sonde SN 440279  
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.25 in  
Tubing Length 108 ft

Pump placement from TOC 99.9 ft

Well Information:

Well ID WGWA-2  
Well diameter 2 in  
Well Total Depth 104.9 ft  
Screen Length 10 ft  
Depth to Water 18.25 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 1.522495 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.63 in  
Total Volume Pumped 13.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 50
Last 5	10:45:07	1800.02	17.10	6.20	159.30	4.76	18.94	0.16	82.44
Last 5	10:50:07	2100.02	17.13	6.22	164.73	4.17	18.94	0.17	78.73
Last 5	10:55:07	2400.02	17.14	6.25	169.82	3.99	18.94	0.17	75.85
Last 5	11:00:07	2700.02	17.14	6.25	174.01	3.64	18.94	0.17	72.76
Last 5	11:05:07	3000.02	17.16	6.26	176.30	3.55	18.88	0.18	70.49
Variance 0			0.01	0.03	5.09			-0.00	-2.88
Variance 1			-0.00	0.00	4.19			0.01	-3.09
Variance 2			0.02	0.01	2.29			0.01	-2.27

Notes

Grab Samples

WGWA-2  
Sample Time 1110

Product Name: Low-Flow System

Date: 2016-11-10 09:23:58

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC  
Site Name Plant Wansley - AP  
Latitude 33° 24' 38.21"  
Longitude -85° -2' -9.39"  
Sonde SN 440279  
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.25 in  
Tubing Length 22.0 ft

Pump placement from TOC 14.0 ft

Well Information:

Well ID WGWA-3  
Well diameter 2 in  
Well Total Depth 19.0 ft  
Screen Length 10 ft  
Depth to Water 5.79 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.6923601 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 50
Last 5	09:10:53	600.09	16.96	5.94	33.82	0.55	5.79	5.52	109.86
Last 5	09:15:53	900.02	17.02	5.69	33.74	0.43	5.79	5.51	112.39
Last 5	09:20:53	1200.02	17.05	5.61	33.74	0.46	5.79	5.49	114.02
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.06	-0.26	-0.08			-0.01	2.53
Variance 2			0.03	-0.08	0.00			-0.02	1.63

Notes

Weather: 50•F Sunny

Grab Samples

WGWA-3  
Sample Time 0925

Product Name: Low-Flow System

Date: 2016-11-10 11:06:59

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC  
Site Name Plant Wansley - AP  
Latitude 33° 24' 38.21"  
Longitude -85° -2' -9.39"  
Sonde SN 440279  
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.25 in  
Tubing Length 76.1 ft

Pump placement from TOC 68.1 ft

Well Information:

Well ID WGWA-4  
Well diameter 2 in  
Well Total Depth 73.1 ft  
Screen Length 10 ft  
Depth to Water 9.55 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.214573 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 1.23 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 50
Last 5	10:44:39	300.03	19.80	5.78	148.61	2.72	10.09	0.34	124.44
Last 5	10:49:39	600.02	18.29	6.18	146.54	2.27	10.40	0.14	92.28
Last 5	10:54:39	900.02	18.03	6.29	144.51	2.03	10.58	0.11	77.07
Last 5	10:59:39	1200.02	17.99	6.31	143.71	1.84	10.73	0.10	67.48
Last 5	11:04:39	1500.02	18.02	6.33	143.49	2.01	10.78	0.10	60.43
Variance 0			-0.26	0.11	-2.03			-0.03	-15.21
Variance 1			-0.04	0.02	-0.80			-0.01	-9.59
Variance 2			0.03	0.01	-0.22			0.00	-7.05

Notes

Weather: 59°F Sunny

Grab Samples

WGWA-4  
Sample Time 1110



Product Name: Low-Flow System

Date: 2016-11-10 12:21:04

Project Information:

Operator Name W.Virgo  
Company Name ERM  
Project Name GPC  
Site Name Plant Wansley - AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 365491  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter 0.25 in  
Tubing Length 28 ft

Pump placement from TOC 20 ft

Well Information:

Well ID WGWA-5  
Well diameter 2 in  
Well Total Depth 23.43 ft  
Screen Length 10 ft  
Depth to Water 19.33 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.6102765 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 46.32 in  
Total Volume Pumped 10.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:49:52	3599.98	19.53	6.72	432.35	7.28	22.11	0.69	-95.33
Last 5	11:54:56	3903.96	19.58	6.74	429.89	3.57	22.33	0.70	-101.33
Last 5	11:59:56	4203.96	19.40	6.75	428.48	3.03	22.46	0.71	-113.15
Last 5	12:04:56	4503.96	19.68	6.74	432.62	10.62	22.65	0.73	-119.13
Last 5	12:09:56	4803.95	19.90	6.75	435.00	118.00	22.83	0.73	-127.16
Variance 0			-0.18	0.00	-1.41			0.01	-11.81
Variance 1			0.28	-0.01	4.14			0.02	-5.98
Variance 2			0.22	0.01	2.38			-0.00	-8.02

Notes

Weather: Sunny ~ 60 F. Due to WL, 3 well volume method required. Purging started @ 1051. Initial purge rate: 250 ml/min  
At 1056, purge rate lowered to 125 ml/min due to drawdown. After 3 well volumes purged, @ 1146, purge rate lowered again to 100 ml/min in attempt to stabilize drawdown. At 1211, turbidity spiked to 118 NTU due to WL drawing close to the bottom of well. Purge rate then increased to 250 ml/min to completely evacuate the well dry. Well purged dry at 1214. ~10.75 total vol purged. TD measured: 23.19. Well will be sampled after sufficient recharge.

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-09 14:15:00

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC  
Site Name Plant Wansley - AP  
Latitude 33° 24' 38.21"  
Longitude -85° -2' -9.39"  
Sonde SN 440279  
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.25 in  
Tubing Length 107.5 ft

Pump placement from TOC 99.5 ft

Well Information:

Well ID WGWA-6  
Well diameter 2 in  
Well Total Depth 104.5 ft  
Screen Length 10 ft  
Depth to Water 20.66 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.517669 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.96 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 50
Last 5	13:51:37	600.02	17.58	6.76	176.03	2.26	21.38	0.46	110.50
Last 5	13:56:37	900.02	18.03	6.94	176.40	1.95	21.38	0.36	106.39
Last 5	14:01:37	1200.02	17.68	7.07	176.57	1.28	21.49	0.19	104.05
Last 5	14:06:37	1500.02	17.67	7.18	176.59	2.38	21.57	0.18	101.73
Last 5	14:11:37	1800.02	17.65	7.27	176.86	2.02	21.62	0.18	99.51
Variance 0			-0.35	0.14	0.18			-0.17	-2.34
Variance 1			-0.01	0.11	0.02			-0.01	-2.32
Variance 2			-0.02	0.09	0.27			-0.01	-2.23

Notes

Weather 69°F cloudy

Grab Samples

WGWA-6  
Sample Time 1415

Product Name: Low-Flow System

Date: 2016-11-09 14:31:15

Project Information:

Operator Name W.Virgo  
Company Name ERM  
Project Name GPC  
Site Name Plant Wansley - AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 365491  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.25 in  
Tubing Length 45 ft

Pump placement from TOC 37 ft

Well Information:

Well ID WGWA-7  
Well diameter 2 in  
Well Total Depth 39.6 ft  
Screen Length 10 ft  
Depth to Water 33.91 ft

Pumping Information:

Final Pumping Rate 350 mL/min  
Total System Volume 0.7743729 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 51.48 in  
Total Volume Pumped 11.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:14:44	900.02	17.01	6.75	236.73	0.65	36.20	1.10	-146.90
Last 5	13:19:44	1200.02	16.96	6.87	246.90	1.46	36.80	1.68	-159.97
Last 5	13:24:44	1500.02	16.96	6.89	272.99	0.61	37.51	0.58	-155.51
Last 5	13:29:44	1800.02	16.87	6.98	257.14	0.47	38.05	1.24	-165.67
Last 5	13:34:44	2100.01	17.43	6.93	273.33	1.05	38.20	1.95	-125.18
Variance 0			-0.01	0.02	26.09			-1.10	4.46
Variance 1			-0.09	0.09	-15.85			0.66	-10.16
Variance 2			0.57	-0.05	16.19			0.71	40.48

Notes

Weather: sunny ~51F. Started Purging at 1301. Due to WL below top of screen, 3 well volumes required. Purge rate: 350 ml/min for well volumes. At 1331, 3 well volumes purged and purge rate lowered to 200 ml/min. Well purged dry at 1336. Final DTW: 38.20 = top of pump. Well sampled on recharge.

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-09 11:27:53

Project Information:

Operator Name W.Virgo  
Company Name ERM  
Project Name GPC  
Site Name Plant Wansley - AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 365491  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.25 in  
Tubing Length 40 ft

Pump placement from TOC 35 ft

Well Information:

Well ID WGWA-18  
Well diameter 2 in  
Well Total Depth 40.0 ft  
Screen Length 10 ft  
Depth to Water 24.13 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.8711092 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 41.23 in  
Total Volume Pumped 17 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:04:51	3900.04	17.47	6.16	84.99	0.19	27.57	1.74	29.06
Last 5	11:09:50	4200.00	17.41	6.12	82.02	0.16	27.57	1.79	32.82
Last 5	11:14:50	4500.00	17.45	6.09	80.43	0.20	27.57	1.76	36.13
Last 5	11:19:50	4799.99	17.46	6.06	78.97	0.21	27.57	1.81	39.47
Last 5	11:24:50	5100.00	17.47	6.03	78.59	0.23	27.57	1.80	43.49
Variance 0			0.04	-0.03	-1.59			-0.03	3.31
Variance 1			0.01	-0.03	-1.46			0.04	3.33
Variance 2			0.01	-0.03	-0.38			-0.01	4.02

Notes

Started purging well @ 1001 at 200 ml/min  
Conductivity, pH, and DO slow to stabilize. Well parameters stable at 1126. Well sampled at 1130 sample rate: 200 ml/min

Grab Samples

WGWA-18  
Sample time: 11:30

Product Name: Low-Flow System

Date: 2016-11-14 12:02:43

Project Information:

Operator Name Andreas Shoredits  
Company Name ERM  
Project Name GPC  
Site Name Plant Wansley - AP  
Latitude 33° 24' 38.19"  
Longitude -85° -2' -9.57"  
Sonde SN 440279  
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type Bladder (Dedicated)  
Tubing Type LDPE  
Tubing Diameter 0.25 in  
Tubing Length 57 ft

Pump placement from TOC 52 ft

Well Information:

Well ID WGWC-8  
Well diameter 2 in  
Well Total Depth 59.4 ft  
Screen Length 10 ft  
Depth to Water 7.36 ft

Pumping Information:

Final Pumping Rate 120 mL/min  
Total System Volume 1.030206 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 24.36 in  
Total Volume Pumped 6.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:18:56	1800.02	19.68	5.82	475.59	0.82	9.34	1.36	137.33
Last 5	11:23:56	2100.02	19.88	5.80	475.44	0.95	9.28	1.38	137.46
Last 5	11:28:56	2400.02	20.03	5.76	475.55	0.33	9.32	1.39	137.15
Last 5	11:33:56	2700.02	20.04	5.73	475.14	0.77	9.38	1.42	137.02
Last 5	11:38:56	3000.02	20.09	5.70	475.61	0.97	9.39	1.43	136.83
Variance 0			0.15	-0.04	0.11			0.01	-0.32
Variance 1			0.01	-0.03	-0.41			0.03	-0.13
Variance 2			0.05	-0.03	0.47			0.01	-0.19

Notes

Parameters stable after three consecutive readings and turbidity < 5 NTU; Start purge @ 10:48, stop purge @ 11:38; Initial purge rate of 170 ml/min lowered to 130 ml/min @ 10:58, and 120 ml/min @ 11:08; Sample time is 11:50 and sample rate is 120 ml/min; Drawdown was reduced from 11:15 after lowering purge rate; pH dropped from 7.16 @ 10:53 to more stable reading closer to 5.70 @ 11:38

Grab Samples  
WGWC-8  
Groundwater sample



Product Name: Low-Flow System

Date: 2016-11-11 09:51:03

Project Information:

Operator Name W.Virgo  
Company Name ERM  
Project Name GPC  
Site Name Plant Wansley - AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 365491  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.25 in  
Tubing Length 150 ft

Pump placement from TOC 142 ft

Well Information:

Well ID WGWC-10  
Well diameter 2 in  
Well Total Depth 147.16 ft  
Screen Length 10 ft  
Depth to Water 21.47 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.93291 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 73.32 in  
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:28:40	1501.00	16.33	6.92	91.30	1.55	25.85	3.84	84.31
Last 5	09:33:40	1801.00	16.33	6.95	91.48	0.99	26.67	3.86	81.00
Last 5	09:38:40	2101.00	16.38	6.95	91.61	1.03	27.43	3.87	79.01
Last 5	09:43:40	2401.00	16.38	6.95	91.95	0.96	27.50	3.85	77.36
Last 5	09:48:40	2701.00	16.38	6.96	92.32	1.10	27.58	3.80	75.77
Variance 0			0.05	0.00	0.14			0.01	-2.00
Variance 1			-0.00	0.01	0.34			-0.02	-1.64
Variance 2			0.00	0.00	0.36			-0.05	-1.59

Notes

Weather: Sunny ~ 55 F. Started purging at 0905. Purge rate: 200 ml/min  
Well parameters stable at 0950. Well sampled at 0955. Sample rate: 200 ml/min

Grab Samples

WGWC-10  
Sample Time: 0955

Product Name: Low-Flow System

Date: 2016-11-11 10:03:30

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC  
Site Name Plant Wansley - AP  
Latitude 33° 24' 38.21"  
Longitude -85° -2' -9.39"  
Sonde SN 440279  
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.25 in  
Tubing Length 52.50 ft

Pump placement from TOC 44.50 ft

Well Information:

Well ID WGWC-11  
Well diameter 2 in  
Well Total Depth 49.50 ft  
Screen Length 10 ft  
Depth to Water 31.61 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.9867684 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 1.47 in  
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 50
Last 5	09:35:20	600.02	15.96	6.69	40.97	8.58	33.07	7.20	103.53
Last 5	09:40:20	900.02	16.03	6.37	41.63	4.83	33.11	6.93	104.67
Last 5	09:50:20	1500.02	16.11	6.09	41.90	3.18	33.13	6.78	107.35
Last 5	09:55:20	1800.02	16.10	6.06	42.21	2.55	33.08	6.73	108.28
Last 5	10:00:20	2100.02	16.09	6.03	42.47	1.88	33.08	6.73	109.61
Variance 0			0.08	-0.28	0.27			-0.15	2.68
Variance 1			-0.01	-0.04	0.32			-0.05	0.93
Variance 2			-0.01	-0.03	0.26			0.00	1.33

Notes

Weather: 56°F Fair

Grab Samples

WGWC-11

Sample Time 1000

DUP-2

Sample Time 1000

Product Name: Low-Flow System

Date: 2016-11-11 12:26:28

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC  
Site Name Plant Wansley - AP  
Latitude 33° 24' 38.21"  
Longitude -85° -2' -9.39"  
Sonde SN 440279  
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.25 in  
Tubing Length 79.5 ft

Pump placement from TOC 71.5 ft

Well Information:

Well ID WGWC-12  
Well diameter 2 in  
Well Total Depth 76.5 ft  
Screen Length 10 ft  
Depth to Water 30.86 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.247392 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.33 in  
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 50
Last 5	11:42:23	1200.02	16.92	6.68	148.57	5.52	31.19	1.01	120.46
Last 5	11:52:23	1800.02	16.92	6.74	148.35	3.18	31.19	0.77	114.76
Last 5	11:57:23	2100.02	16.90	6.74	148.08	2.59	31.19	0.71	111.61
Last 5	12:12:23	3000.02	16.92	6.69	147.84	2.16	31.19	0.59	98.62
Last 5	12:17:23	3300.02	17.16	6.76	0.16	--	--	7.39	57.44
Variance 0			-0.02	-0.00	-0.27			-0.07	-3.15
Variance 1			0.02	-0.05	-0.24			-0.12	-12.99
Variance 2			0.24	0.07	-147.68			6.81	-41.18

Notes

Weather: 68•F Fair

Grab Samples

WGWC-12  
Sample Time 1215

Product Name: Low-Flow System

Date: 2016-11-10 16:23:21

Project Information:

Operator Name W.Virgo  
Company Name ERM  
Project Name GPC  
Site Name Plant Wansley - AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 365491  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.25 in  
Tubing Length 100 ft

Pump placement from TOC 91 ft

Well Information:

Well ID WGWC-13  
Well diameter 2 in  
Well Total Depth 96.31 ft  
Screen Length 10 ft  
Depth to Water 17.84 ft

Pumping Information:

Final Pumping Rate 0 mL/min  
Total System Volume 1.450273 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 100.44 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	16:00:44	1200.01	17.30	6.52	99.99	7.04	26.00	1.02	65.05
Last 5	16:05:44	1500.06	17.49	6.51	100.53	4.00	26.15	1.05	64.25
Last 5	16:10:44	1800.02	17.55	6.51	99.54	3.92	26.19	1.15	63.35
Last 5	16:15:44	2099.99	17.56	6.51	99.83	3.40	26.19	1.26	63.18
Last 5	16:20:44	2399.99	17.63	6.50	100.35	3.39	26.20	1.26	63.45
Variance 0			0.06	0.01	-0.99			0.10	-0.90
Variance 1			0.01	-0.01	0.29			0.11	-0.16
Variance 2			0.07	-0.01	0.53			0.00	0.27

Notes

Weather: Sunny ~70F. Started Purging at 15:42. Purge rate 200 ml/min.  
Well Parameters stable @ 1622. Well sampled at 1626. Sample rate: 200 ml/min

Grab Samples

WGWC-13  
Sample Time: 1626

Product Name: Low-Flow System

Date: 2016-11-10 15:22:20

Project Information:

Operator Name W.Virgo  
Company Name ERM  
Project Name GPC  
Site Name Plant Wansley - AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 365491  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.25 in  
Tubing Length 60 ft

Pump placement from TOC 50 ft

Well Information:

Well ID WGWC-14  
Well diameter 2 in  
Well Total Depth 54.78 ft  
Screen Length 10 ft  
Depth to Water 17.91 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.064164 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 39.6 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:59:42	600.02	17.37	6.19	88.01	4.10	20.80	1.62	67.61
Last 5	15:04:42	900.02	17.31	6.13	87.57	3.01	21.04	1.64	70.87
Last 5	15:09:42	1200.01	17.36	6.11	87.25	2.65	21.18	1.66	72.45
Last 5	15:14:42	1500.01	17.29	6.08	86.93	2.47	21.20	1.66	74.79
Last 5	15:19:42	1800.00	17.27	6.08	86.87	2.52	21.21	1.67	75.33
Variance 0			0.04	-0.02	-0.32			0.02	1.58
Variance 1			-0.07	-0.03	-0.31			0.01	2.34
Variance 2			-0.02	-0.00	-0.07			0.00	0.54

Notes

Weather: Sunny ~ 70F. Started purging well at 14:51. Purge rate: 200 ml/min.  
Well parameters stable at 1521. Well sampled at 1525, sample rate: 200 ml/min.

Grab Samples

WGWC-14  
Sample Time: 1525

Product Name: Low-Flow System

Date: 2016-11-10 16:23:22

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC  
Site Name Plant Wansley - AP  
Latitude 33° 24' 38.21"  
Longitude -85° -2' -9.39"  
Sonde SN 440279  
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.25 in  
Tubing Length 59.0 ft

Pump placement from TOC 51.0 ft

Well Information:

Well ID WGWC-15  
Well diameter 2 in  
Well Total Depth 56.0 ft  
Screen Length 10 ft  
Depth to Water 11.10 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.049511 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 252 in  
Total Volume Pumped 21.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 50
Last 5	15:59:55	9299.99	19.81	7.63	366.13	0.55	31.67	2.01	32.26
Last 5	16:04:55	9600.00	19.86	7.68	375.30	0.57	31.78	1.74	31.81
Last 5	16:09:55	9900.00	19.82	7.70	380.00	0.57	31.90	1.55	32.15
Last 5	16:14:55	10200.00	19.75	7.73	379.82	0.45	32.02	1.46	31.93
Last 5	16:19:55	10500.00	19.78	7.76	375.97	0.99	32.10	1.40	31.16
Variance 0			-0.05	0.03	4.70			-0.19	0.34
Variance 1			-0.07	0.03	-0.18			-0.10	-0.22
Variance 2			0.03	0.03	-3.86			-0.06	-0.77

Notes

Weather: 70°F Partly Cloudy

Grab Samples

WGWC-15  
Sample Time 1625

Product Name: Low-Flow System

Date: 2016-11-10 12:54:06

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC  
Site Name Plant Wansley - AP  
Latitude 33° 24' 38.21"  
Longitude -85° -2' -9.39"  
Sonde SN 440279  
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.25 in  
Tubing Length 37.7 ft

Pump placement from TOC 29.7 ft

Well Information:

Well ID WGWC-16  
Well diameter 2 in  
Well Total Depth 34.7 ft  
Screen Length 10 ft  
Depth to Water 10.7 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.843908 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.1 in  
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.2	+/- 5%	+/- 10		+/- 0.2	+/- 50
Last 5	12:31:48	1800.02	20.95	5.76	1518.86	1.73	10.80	0.27	79.03
Last 5	12:36:48	2100.01	20.93	5.70	1595.98	1.10	10.80	0.25	81.92
Last 5	12:41:48	2400.01	20.93	5.66	1653.64	1.09	10.80	0.25	84.31
Last 5	12:46:48	2700.01	20.98	5.62	1698.94	0.75	10.80	0.24	86.69
Last 5	12:51:48	3000.01	21.02	5.60	1730.09	0.67	10.80	0.23	88.65
Variance 0			0.00	-0.04	57.67			-0.00	2.39
Variance 1			0.05	-0.04	45.30			-0.01	2.37
Variance 2			0.04	-0.02	31.15			-0.00	1.97

Notes

Weather: 67°F Sunny

Grab Samples

WGWC-16

Sample Time 1255

Product Name: Low-Flow System

Date: 2016-11-10 13:47:30

Project Information:

Operator Name W.Virgo  
Company Name ERM  
Project Name GPC  
Site Name Plant Wansley - AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 365491  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.25 in  
Tubing Length 100 ft

Pump placement from TOC 91 ft

Well Information:

Well ID WGWC-17  
Well diameter 2 in  
Well Total Depth 96.16 ft  
Screen Length 10 ft  
Depth to Water 22.25 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.450273 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 29.16 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:24:01	900.02	18.01	6.42	142.69	5.30	24.65	1.65	-31.67
Last 5	13:29:01	1200.02	18.02	6.49	153.50	2.25	24.68	1.25	-31.99
Last 5	13:34:01	1500.02	18.02	6.52	152.13	2.45	24.68	1.06	-29.99
Last 5	13:39:01	1800.02	18.09	6.52	148.48	1.37	24.68	1.10	-26.41
Last 5	13:44:01	2100.02	18.07	6.51	145.11	1.24	24.68	1.20	-22.38
Variance 0			-0.00	0.04	-1.37			-0.19	2.00
Variance 1			0.08	-0.00	-3.65			0.04	3.58
Variance 2			-0.02	-0.01	-3.37			0.10	4.04

Notes

Weather: sunny ~70 F. Started purging well @ 1310 at 200 ml/min  
Well parameters stable at 13:45. Well sampled at 1350. Sample rate: 200 ml/Min

Grab Samples

WGWC-17  
Sample Time: 1350  
DUP-1



Product Name: Low-Flow System

Date: 2017-01-17 13:47:39

Project Information:

Operator Name Andreas Shore dots  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 33° 26' 9.57"  
Longitude -85° -1' -20.07"  
Sonde SN 456959  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter 0.31 in  
Tubing Length 126 ft

Pump placement from TOC 121 ft

Well Information:

Well ID WGWA-1  
Well diameter 2 in  
Well Total Depth 129.6 ft  
Screen Length 10 ft  
Depth to Water 29.71 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 2.355097 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.12 in  
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:08:16	1200.01	19.31	5.89	33.72	0.01	29.71	1.50	1.62
Last 5	13:13:16	1500.02	19.33	5.66	34.27	0.05	29.71	1.53	3.02
Last 5	13:18:16	1800.01	19.47	5.56	34.79	0.00	29.71	1.67	8.99
Last 5	13:23:16	2100.01	19.59	5.51	35.08	0.00	29.71	1.87	15.38
Last 5	13:28:17	2401.01	19.70	5.48	35.02	0.00	29.71	1.94	19.69
Variance 0			0.14	-0.10	0.51			0.14	5.97
Variance 1			0.12	-0.05	0.29			0.20	6.39
Variance 2			0.10	-0.03	-0.07			0.07	4.31

Notes

Start purging well at 12:48 and first reading taken at 12:53; Stop purging well at 13:28; Purge rate of 100 ml/min maintained throughout; Sample time is 13:35 at a rate of 100 ml/min; Weather is cloudy 60 degrees F with a strong wind out of the west

Grab Samples

WGWA-1  
Groundwater sample taken at 13:35

Product Name: Low-Flow System

Date: 2017-01-17 12:00:28

Project Information:

Operator Name Andreas Shore dots  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 33° 26' 9.64"  
Longitude -85° -1' -19.99"  
Sonde SN 456959  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter 0.31 in  
Tubing Length 100 ft

Pump placement from TOC 95 ft

Well Information:

Well ID WGWA-2  
Well diameter 2 in  
Well Total Depth 104.9 ft  
Screen Length 10 ft  
Depth to Water 10.24 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 1.966204 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 10.2 in  
Total Volume Pumped 7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:08:57	600.02	16.85	6.43	224.42	4.63	10.86	1.88	-26.35
Last 5	11:13:57	900.02	16.85	6.69	253.71	1.25	11.01	1.20	-38.76
Last 5	11:18:57	1200.00	16.86	6.77	260.35	0.69	11.01	0.83	-52.71
Last 5	11:23:57	1500.00	16.87	6.80	258.37	0.76	11.04	0.64	-58.27
Last 5	11:28:57	1800.00	16.88	6.80	255.66	0.25	11.09	0.45	-59.46
Variance 0			0.01	0.08	6.64			-0.37	-13.95
Variance 1			0.01	0.03	-1.98			-0.19	-5.56
Variance 2			0.01	0.01	-2.71			-0.18	-1.19

Notes

Start purging well at 10:58, first reading at 11:03; Stop purge at 11:28; Purge rate of 250 ml/min maintained throughout; Sample time is 11:35; Sample rate is 250 ml/min; Weather is partly cloudy at 62 degrees F with a breeze out of the west

Grab Samples

WGWA-2  
Groundwater sample

DUP-2

Duplicate groundwater sample

Product Name: Low-Flow System

Date: 2017-01-18 15:15:34

Project Information:

Operator Name Markevious Thomas  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364452  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter .17 in  
Tubing Length 21 ft

Pump placement from TOC 14 ft

Well Information:

Well ID WGWA-3  
Well diameter 2 in  
Well Total Depth 19.0 ft  
Screen Length 10 ft  
Depth to Water 4.75 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.1837319 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:50:04	300.09	16.91	6.18	33.35	0.23	4.78	5.08	44.80
Last 5	14:55:04	600.02	17.19	5.96	33.39	0.11	4.78	4.95	52.88
Last 5	15:00:04	900.04	16.83	5.90	33.30	0.17	4.77	4.96	61.83
Last 5	15:05:04	1200.04	16.83	5.81	33.29	0.10	4.77	4.95	70.06
Last 5	15:10:04	1500.04	16.79	5.81	33.28	0.08	4.77	4.94	72.56
Variance 0			-0.36	-0.07	-0.09			0.01	8.95
Variance 1			0.00	-0.09	-0.01			-0.01	8.23
Variance 2			-0.04	-0.00	-0.01			-0.01	2.51

Notes

1445 start purge at 250mL/min; 1510 all parameters stable; 1515 sampled at 250mL/min. Partly cloudy, light wind, 72F

Grab Samples

WGWA-3  
Sampled at 1515

Product Name: Low-Flow System

Date: 2017-01-18 14:04:43

Project Information:

Operator Name Markevious Thomas  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364452  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter .17 in  
Tubing Length 75 ft

Pump placement from TOC 68 ft

Well Information:

Well ID WGWA-4  
Well diameter 2 in  
Well Total Depth 73.1 ft  
Screen Length 10 ft  
Depth to Water 7.5 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.8167567 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 13.2 in  
Total Volume Pumped 6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:25:24	300.12	17.14	6.95	139.19	4.20	7.98	0.48	-64.31
Last 5	13:30:24	600.05	16.98	6.93	141.77	2.70	8.20	0.15	-98.69
Last 5	13:35:24	900.05	17.01	6.95	141.46	1.61	8.43	0.07	-116.59
Last 5	13:40:24	1200.05	17.05	6.95	140.64	0.94	8.48	0.08	-121.36
Last 5	13:45:24	1500.04	17.01	6.94	139.81	1.17	8.60	0.09	-120.02
Variance 0			0.04	0.02	-0.31			-0.08	-17.90
Variance 1			0.03	0.00	-0.82			0.00	-4.77
Variance 2			-0.04	-0.01	-0.82			0.02	1.33

Notes

1320 start purge at 250mL/min; 1345 all parameters stable; 1350 sampled at 250mL/min. Cloudy, calm, 68F

Grab Samples

WGWA-4  
Sampled at 1350

Product Name: Low-Flow System

Date: 2017-01-18 11:34:20

Project Information:

Operator Name Markevious Thomas  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364452  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter .17 in  
Tubing Length 30 ft

Pump placement from TOC 20 ft

Well Information:

Well ID WGWA-5  
Well diameter 2 in  
Well Total Depth 23.19 ft  
Screen Length 10 ft  
Depth to Water 17.7 ft

Pumping Information:

Final Pumping Rate 500 mL/min  
Total System Volume 0.2239027 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 71 in  
Total Volume Pumped 15 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:05:47	600.03	17.61	5.71	66.16	24.30	18.77	6.48	118.31
Last 5	11:10:47	900.03	17.72	6.12	137.83	4.62	20.15	6.72	106.53
Last 5	11:15:47	1200.02	17.72	6.49	239.98	33.70	21.17	6.74	104.02
Last 5	11:20:48	1501.02	17.99	6.41	407.17	86.50	22.20	7.10	57.53
Last 5	11:25:48	1801.03	17.86	6.53	502.11	44.00	22.80	2.94	19.77
Variance 0			0.00	0.37	102.15			0.01	-2.51
Variance 1			0.27	-0.07	167.19			0.36	-46.49
Variance 2			-0.13	0.12	94.94			-4.15	-37.77

Notes

1055 start pump at 500mL/min; 1120 3 well volumes purged; 1126 well dry.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-19 10:12:34

Project Information:

Operator Name Andreas Shore dots  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 33° 24' 51.13"  
Longitude -85° -1' -51.28"  
Sonde SN 456959  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 26 ft

Pump placement from TOC 20 ft

Well Information:

Well ID WGWA-5  
Well diameter 2 in  
Well Total Depth 23.19 ft  
Screen Length 10 ft  
Depth to Water 18.74 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.326049 L  
Calculated Sample Rate 180 sec  
Stabilization Drawdown 2.76 in  
Total Volume Pumped 0.3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:00:51	180.03	15.30	6.59	132.61	2.91	18.97	8.21	115.61
Last 5									
Last 5									
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.00	0.00	0.00			0.00	0.00
Variance 2			0.00	0.00	0.00			0.00	0.00

Notes

Start purging well @ 09:50 after evacuating water column yesterday (1/18/17), initial purge rate 100 ml/min; Stop purging well @ 10:02; Sampling well within 24 h of purging well dry; Sample rate is 100 ml/min; Weather is partly cloudy, 58 degrees F

Grab Samples

WGWA-5  
Groundwater sample collected @ 10:05

Product Name: Low-Flow System

Date: 2017-01-18 12:36:59

Project Information:

Operator Name Markevious Thomas  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364452  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter .17 in  
Tubing Length 102 ft

Pump placement from TOC 99.5 ft

Well Information:

Well ID WGWA-6  
Well diameter 2 in  
Well Total Depth 104.5 ft  
Screen Length 10 ft  
Depth to Water 19.7 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.9372692 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 17.52 in  
Total Volume Pumped 7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:05:16	600.03	16.92	7.49	172.25	0.75	20.50	0.25	-136.32
Last 5	12:10:16	900.02	16.83	7.64	172.52	1.03	20.87	0.09	-151.42
Last 5	12:15:16	1200.02	16.97	7.72	172.26	1.01	21.00	0.09	-154.27
Last 5	12:20:17	1501.02	16.96	7.72	172.44	0.67	21.10	0.11	-155.17
Last 5	12:25:17	1801.03	16.93	7.72	172.58	1.12	21.16	0.13	-154.52
Variance 0			0.14	0.07	-0.25			0.00	-2.86
Variance 1			-0.00	0.01	0.18			0.02	-0.89
Variance 2			-0.03	0.00	0.14			0.02	0.65

Notes

1155 start purge at 250mL/min; 1225 all parameters stable; 1230 sampled at 250mL/min. Overcast, light breeze, 67F

Grab Samples

WGWA-6  
Sampled at 1230

Product Name: Low-Flow System

Date: 2017-01-18 13:25:12

Project Information:

Operator Name Andreas Shore dots  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 33° 24' 38.47"  
Longitude -85° -2' -9.09"  
Sonde SN 456959  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 45 ft

Pump placement from TOC 35 ft

Well Information:

Well ID WGWA-7  
Well diameter 2 in  
Well Total Depth 39.6 ft  
Screen Length 10 ft  
Depth to Water 33.10 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.440854 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 56.15 in  
Total Volume Pumped 14.3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:35:00	4501.93	17.32	7.28	266.32	90.60	37.50	3.76	-99.41
Last 5	12:40:05	4806.93	17.10	7.28	271.71	94.50	37.59	4.44	-89.65
Last 5	12:45:05	5106.93	17.08	7.39	263.34	64.30	37.65	5.15	-83.40
Last 5	12:50:05	5406.93	17.12	7.44	245.27	37.00	37.70	5.68	-80.81
Last 5	12:55:05	5706.93	17.12	7.48	232.75	29.80	37.78	5.74	-82.82
Variance 0			-0.01	0.10	-8.38			0.71	6.26
Variance 1			0.04	0.06	-18.06			0.53	2.59
Variance 2			-0.01	0.04	-12.52			0.06	-2.01

Notes

Start purging well at 11:20 at a rate of 100 ml/min, first reading taken at 11:25 but flow cell was not yet filled; Stop purge at 12:55 due to low water level and slow recharge; Initial purge rate was increased to 250 ml/min @ 11:45, decreased to 200 ml/min @ 12:05 and to 100 ml/min @ 12:25; Pump intake depth was lowered to 36 ft btoc @ 11:55, to 37 ft btoc @ 12:15, and to around 37.8 ft btoc @ 12:20; Three volumes purged @ 12:35 with turbidity > 90 NTU; Return to well to sample when sufficiently recharged and turbidity is lower; No sample taken.



Grab Samples

Product Name: Low-Flow System

Date: 2017-01-18 17:25:39

Project Information:

Operator Name Andreas Shore dots  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 33° 24' 50.89"  
Longitude -85° -1' -51.36"  
Sonde SN 456959  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 45 ft

Pump placement from TOC 37 ft

Well Information:

Well ID WGWA-7  
Well diameter 2 in  
Well Total Depth 39.6 ft  
Screen Length 10 ft  
Depth to Water 34.20 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.440854 L  
Calculated Sample Rate 180 sec  
Stabilization Drawdown 17.04 in  
Total Volume Pumped 5.7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	16:56:53	2700.00	17.29	7.11	76.90	5.97	35.29	9.47	30.72
Last 5	16:59:53	2880.00	17.29	7.12	76.52	5.56	35.39	9.38	31.00
Last 5	17:02:53	3060.00	17.10	7.13	76.78	5.82	35.45	9.35	31.60
Last 5	17:05:53	3240.00	17.04	7.15	76.60	5.16	35.56	9.29	32.07
Last 5	17:08:53	3420.00	17.01	7.16	76.56	4.92	35.62	9.30	32.48
Variance 0			-0.19	0.01	0.26			-0.03	0.59
Variance 1			-0.06	0.01	-0.18			-0.06	0.48
Variance 2			-0.03	0.01	-0.05			0.01	0.41

Notes

Resume purge after purging well dry; Start purging well @ 16:11, first reading @ 16:14 taken @ three (3) minute intervals; Stop purging well @ 17:08; Purge rate maintained @ 100 ml/min throughout; Pump intake depth was @ 37 ft btoc; Turbidity started > 20 NTU and slowly decreased to < 5 NTU @ 17:08; Sample rate is 100 ml/min; Weather is sunny and clear, 65 degrees F.

Grab Samples

WGWA-7

Groundwater sample at 17:10

Product Name: Low-Flow System

Date: 2017-01-19 13:34:09

Project Information:

Operator Name Andreas Shore dots  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 33° 24' 51.13"  
Longitude -85° -1' -51.28"  
Sonde SN 456959  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter 0.31 in  
Tubing Length 40 ft

Pump placement from TOC 35 ft

Well Information:

Well ID WGWA-18  
Well diameter 2 in  
Well Total Depth 40 ft  
Screen Length 10 ft  
Depth to Water 25.28 ft

Pumping Information:

Final Pumping Rate 170 mL/min  
Total System Volume 1.078682 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 25.8 in  
Total Volume Pumped 6.55 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:50:39	900.02	17.40	7.01	212.07	1.02	27.08	0.76	-59.77
Last 5	12:55:39	1200.02	17.59	6.89	182.96	0.67	27.27	0.72	-32.44
Last 5	13:00:39	1499.99	17.42	6.77	171.16	0.52	27.31	0.68	-25.16
Last 5	13:05:39	1799.99	17.41	6.72	169.20	0.53	27.39	0.61	-27.46
Last 5	13:10:39	2099.99	17.71	6.71	168.73	0.30	27.43	0.49	-31.34
Variance 0			-0.17	-0.12	-11.80			-0.04	7.29
Variance 1			-0.01	-0.05	-1.96			-0.07	-2.30
Variance 2			0.31	-0.01	-0.47			-0.12	-3.88

Notes

Start purging well @ 12:35 at a rate of 200 ml/min, first reading taken @ 12:40; Stop purging well @ 13:10; Final purge rate and sample rate was 170 ml/min; Purge rate was lowered to 170 ml/min @ 12:55 to reduce drawdown; Turbidity remained < 5 NTU throughout; Weather is partly cloudy with an easterly breeze, 62 degrees F.

Grab Samples

WGWA-18

Groundwater sample collected @ 13:20

Product Name: Low-Flow System

Date: 2017-02-06 14:04:55

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 456959  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.175 in  
Tubing Length 64.40 ft

Pump placement from TOC 54.40 ft

Well Information:

Well ID WGWC-8  
Well diameter 2 in  
Well Total Depth 59.40 ft  
Screen Length 10 ft  
Depth to Water 2.53 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.5696015 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 27.96 in  
Total Volume Pumped 4.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10%
Last 5	13:40:04	900.02	17.32	5.84	477.74	0.38	4.35	2.02	91.15
Last 5	13:45:04	1199.84	17.28	5.80	485.34	0.26	4.60	1.75	88.96
Last 5	13:50:04	1499.84	17.81	5.71	493.04	0.53	4.69	1.70	91.70
Last 5	13:55:04	1799.84	18.08	5.69	492.35	0.48	4.78	1.62	91.10
Last 5	14:00:04	2099.84	18.34	5.66	493.16	0.14	4.86	1.57	91.70
Variance 0			0.54	-0.09	7.70			-0.05	2.74
Variance 1			0.27	-0.02	-0.69			-0.08	-0.60
Variance 2			0.26	-0.03	0.81			-0.05	0.60

Notes

Weather: 64F mostly sunny. Purge Time: 1325/1400

Grab Samples

WGWC-8  
Sample Time 1405

Product Name: Low-Flow System

Date: 2017-02-06 12:21:46

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 456959  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.25 in  
Tubing Length 152.16 ft

Pump placement from TOC 142.16 ft

Well Information:

Well ID WGWC-10  
Well diameter 2 in  
Well Total Depth 147.16 ft  
Screen Length 10 ft  
Depth to Water 19.82 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 1.73376 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 45.36 in  
Total Volume Pumped 4.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10%
Last 5	11:53:22	300.03	16.29	6.87	89.27	0.31	22.60	4.05	65.37
Last 5	11:58:22	600.03	16.40	6.91	89.08	0.67	23.25	4.01	64.67
Last 5	12:03:22	900.03	16.38	6.90	89.06	0.33	23.65	3.99	65.40
Last 5	12:08:22	1200.02	16.42	6.92	0.23	1.01	23.60	6.49	42.62
Last 5	12:13:22	1500.02	16.32	6.93	88.98	0.42	23.60	4.22	64.30
Variance 0			-0.02	-0.01	-0.03			-0.02	0.72
Variance 1			0.04	0.01	-88.82			2.49	-22.78
Variance 2			-0.10	0.01	88.75			-2.27	21.69

Notes

Weather: 60F Cloudy. Purge Time: 1145/1210.

Grab Samples

WGWC-10  
Sample Time 1215

Product Name: Low-Flow System

Date: 2017-01-27 11:46:48

Project Information:

Operator Name Jim Morrison  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364456  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter .375 in  
Tubing Length 50 ft

Pump placement from TOC 44.5 ft

Well Information:

Well ID WGWC-11  
Well diameter 2 in  
Well Total Depth 49.5 ft  
Screen Length 10 ft  
Depth to Water 30.6 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 1.175932 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 2 in  
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	11:23:08	600.03	14.91	6.28	58.43	2.07	31.74	6.24	24.85
Last 5	11:28:08	900.02	14.64	6.23	58.91	2.27	31.78	6.28	27.06
Last 5	11:33:08	1200.02	15.34	6.24	57.84	1.79	31.81	6.25	28.55
Last 5	11:38:08	1500.00	13.85	6.19	59.01	1.35	31.83	6.35	32.08
Last 5	11:43:08	1800.00	14.08	6.21	57.28	1.40	31.88	6.18	34.12
Variance 0			0.70	0.01	-1.07			-0.04	1.49
Variance 1			-1.49	-0.05	1.17			0.10	3.53
Variance 2			0.23	0.02	-1.72			-0.16	2.04

Notes

Parameters stable after 3 liters purged at 100 ml/min. Sample WGWC-11 at 100 ml/min at 1155. Weather is sunny and 35 degrees

Grab Samples



Product Name: Low-Flow System

Date: 2017-01-27 10:00:49

Project Information:

Operator Name Jim Morrison  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364456  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter .375 in  
Tubing Length 77 ft

Pump placement from TOC 71.5 ft

Well Information:

Well ID WGWC-12  
Well diameter 2 in  
Well Total Depth 76.5 ft  
Screen Length 10 ft  
Depth to Water 29.4 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 1.762336 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 1 in  
Total Volume Pumped 6.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 0
Last 5	09:32:02	1200.03	14.71	6.57	152.12	1.32	29.60	0.76	34.90
Last 5	09:37:02	1500.03	14.32	6.60	150.09	1.36	29.58	0.66	31.43
Last 5	09:42:02	1800.03	13.71	6.62	151.65	1.41	29.58	0.58	28.81
Last 5	09:47:01	2100.01	13.62	6.63	152.33	1.40	29.57	0.51	25.50
Last 5	09:57:01	2700.01	13.82	6.66	149.39	1.48	29.57	0.46	20.55
Variance 0			-0.61	0.02	1.56			-0.08	-2.62
Variance 1			-0.09	0.01	0.68			-0.07	-3.31
Variance 2			0.20	0.03	-2.94			-0.05	-4.95

Notes

Parameters stable at 1000 with little drawdown. Purged 6.75 liters at 150 ml/min. Sample at 150ml/min at 1010. Weather is clear and 35 degrees.

Grab Samples

Product Name: Low-Flow System

Date: 2017-01-27 11:14:14

Project Information:

Operator Name M. Rogers  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364452  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.25 in  
Tubing Length 96 ft

Pump placement from TOC 2 ft

Well Information:

Well ID WGWC-13  
Well diameter 2 in  
Well Total Depth 96.31 ft  
Screen Length 10 ft  
Depth to Water 11.96 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 1.191662 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 57 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10%
Last 5	10:46:57	1500.03	14.94	6.46	98.07	1.90	15.22	1.11	70.13
Last 5	10:51:57	1800.03	14.94	6.48	96.92	1.77	15.50	0.97	69.12
Last 5	11:01:57	2400.03	14.76	6.47	96.26	1.06	15.70	0.75	68.41
Last 5	11:06:57	2700.02	14.80	6.48	95.42	0.96	16.09	0.67	67.70
Last 5	11:11:57	3000.03	14.85	6.47	94.03	1.21	16.71	0.61	67.78
Variance 0			-0.18	-0.01	-0.66			-0.22	-0.72
Variance 1			0.03	0.01	-0.84			-0.08	-0.71
Variance 2			0.06	-0.00	-1.39			-0.06	0.08

Notes

Taking extra Radium bottle here  
Parameters stable. Taking an extra radium bottle here. .1L/min Weather: sunny windy 30's

Grab Samples

WGWC-13  
Sampling at 1115

Product Name: Low-Flow System

Date: 2017-01-27 09:38:40

Project Information:

Operator Name Myles Rogers  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364452  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter .17 in  
Tubing Length 54 ft

Pump placement from TOC 2 ft

Well Information:

Well ID WGWC-14  
Well diameter 2 in  
Well Total Depth 54.78 ft  
Screen Length 10 ft  
Depth to Water 11.04 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.3310249 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 29.76 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10%
Last 5	09:15:26	600.03	15.66	5.84	98.44	12.71	13.06	0.92	100.78
Last 5	09:20:26	900.02	15.42	5.85	99.83	3.93	13.56	0.86	99.49
Last 5	09:25:26	1200.02	15.30	5.86	103.96	3.64	13.53	1.17	98.47
Last 5	09:30:26	1500.02	15.35	5.85	108.03	2.20	13.43	1.23	96.89
Last 5	09:35:26	1800.07	15.41	5.83	109.26	2.63	13.52	1.15	96.82
Variance 0			-0.11	0.01	4.12			0.31	-1.02
Variance 1			0.04	-0.01	4.08			0.06	-1.58
Variance 2			0.06	-0.02	1.22			-0.08	-0.06

Notes

Parameters stable. Sampling at .2L/min. Weather: sunny 40's. Taking DUP-2 here

Grab Samples

WGWC-14  
Sampling at 0940

Product Name: Low-Flow System

Date: 2017-01-24 12:15:16

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364452  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.25 in  
Tubing Length 56.0 ft

Pump placement from TOC 51.0 ft

Well Information:

Well ID WGWC-15  
Well diameter 2 in  
Well Total Depth 56.0 ft  
Screen Length 10 ft  
Depth to Water 6.75 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.8055529 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 314.28 in  
Total Volume Pumped 20 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10%
Last 5	11:48:01	9001.89	18.12	7.66	279.32	--	30.44	1.84	-79.94
Last 5	11:53:01	9301.89	18.25	7.67	275.20	0.38	31.06	2.06	-75.46
Last 5	11:58:01	9601.89	18.10	7.70	272.22	0.45	32.89	2.09	-72.07
Last 5	12:03:01	9901.89	16.76	7.70	270.83	0.32	32.94	2.15	-67.95
Last 5	12:08:01	10201.88	17.05	7.71	275.30	0.36	32.94	2.02	-66.83
Variance 0			-0.15	0.03	-2.98			0.03	3.40
Variance 1			-1.35	0.01	-1.39			0.06	4.11
Variance 2			0.30	0.01	4.48			-0.13	1.13

Notes

Weather: 54F Sunny. Purge time: 0918/1208. Water level stabilizes around 31ft btoc.

Grab Samples

WGWC-15  
Sample Time: 1210

Product Name: Low-Flow System

Date: 2017-01-24 13:19:59

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364452  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.25 in  
Tubing Length 34 ft

Pump placement from TOC 29 ft

Well Information:

Well ID WGWC-16  
Well diameter 2 in  
Well Total Depth 34.7 ft  
Screen Length 10 ft  
Depth to Water 6.23 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.5931929 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 1.2 in  
Total Volume Pumped 7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10%
Last 5	12:55:07	600.03	19.02	5.81	1752.13	2.27	6.33	1.31	54.33
Last 5	13:00:07	900.03	18.97	5.69	1825.05	1.80	6.33	0.89	69.14
Last 5	13:05:07	1200.02	19.06	5.63	1862.79	1.21	6.33	0.73	79.08
Last 5	13:10:07	1500.06	19.17	5.58	1891.03	0.99	6.33	0.70	86.41
Last 5	13:15:07	1800.02	19.15	5.54	1906.14	0.82	6.33	0.50	91.60
Variance 0			0.09	-0.06	37.74			-0.16	9.94
Variance 1			0.11	-0.05	28.24			-0.04	7.33
Variance 2			-0.02	-0.03	15.11			-0.20	5.19

Notes

Weather: 57F Sunny. Purge Time: 1245/1315

Grab Samples

WGWC-16  
Sample Time 1320

Product Name: Low-Flow System

Date: 2017-01-20 11:07:56

Project Information:

Operator Name Andreas Shore dots  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 33° 24' 39.05"  
Longitude -85° -2' -7.4"  
Sonde SN 456959  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter 0.31 in  
Tubing Length 95 ft

Pump placement from TOC 91 ft

Well Information:

Well ID WGWC-17  
Well diameter 2 in  
Well Total Depth 96.16 ft  
Screen Length 10 ft  
Depth to Water 19.01 ft

Pumping Information:

Final Pumping Rate 190 mL/min  
Total System Volume 1.894994 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 30 in  
Total Volume Pumped 10.4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:08:07	2099.96	17.11	6.69	159.82	0.78	21.40	0.99	-35.49
Last 5	10:13:07	2399.96	17.11	6.64	154.57	1.20	21.35	1.22	-24.16
Last 5	10:18:07	2699.95	17.07	6.60	148.44	0.97	21.46	1.53	-13.81
Last 5	10:23:07	2999.95	17.23	6.57	144.93	1.39	21.50	1.62	-10.97
Last 5	10:28:07	3299.95	17.16	6.55	142.69	0.90	21.51	1.68	-8.61
Variance 0			-0.04	-0.04	-6.13			0.31	10.35
Variance 1			0.16	-0.03	-3.51			0.08	2.84
Variance 2			-0.07	-0.02	-2.24			0.07	2.36

Notes

Start purging well @ 09:33, first reading @ 09:38; Stop purging well @ 10:28; Initial purge rate of 100 ml/min was increased to 250 ml/min @ 09:38, decreased to 150 ml/min @ 09:48, increased to 200 ml/min @ 09:53, decreased to 170 @ 10:03, and increased to a final rate of 190 ml/min @ 10:08; Drawdown stabilized @ 190 ml/min; Sample rate @ 190 ml/min; Weather is cloudy, 62 degrees F.

Grab Samples

WGWC-17

Groundwater sample collected @ 10:35; Second radium bottle collected

Product Name: Low-Flow System

Date: 2017-02-06 12:33:57

Project Information:

Operator Name Jim Morrison  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364456  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter 0.375 in  
Tubing Length 95 ft

Pump placement from TOC 90 ft

Well Information:

Well ID WGWC-19  
Well diameter 2 in  
Well Total Depth 94.8 ft  
Screen Length 10 ft  
Depth to Water 22.49 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 2.153271 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10%
Last 5	12:10:01	1199.99	16.92	6.75	139.00	5.46	23.63	0.44	40.54
Last 5	12:15:01	1499.99	16.92	6.77	140.14	5.57	23.60	0.40	41.15
Last 5	12:20:01	1799.99	16.93	6.78	141.36	4.13	23.50	0.39	42.26
Last 5	12:25:01	2099.99	16.95	6.79	142.72	4.10	23.57	0.37	42.44
Last 5	12:30:01	2399.99	16.95	6.80	144.31	3.36	23.63	0.38	42.44
Variance 0			0.01	0.01	1.22			-0.02	1.11
Variance 1			0.02	0.00	1.36			-0.02	0.19
Variance 2			-0.01	0.01	1.59			0.01	-0.01

Notes

Parameters stable and turbidity less than 5 NTUs at 1230. Purge and sample at 200 ml/min. 8 liters purged. Weather is cloudy and 60 degrees.  
Sample WGWC-19 at 1240

Grab Samples





### GROUNDWATER SAMPLING LOG SHEET

Client:	GPC	Project No.:	0372406	Sampling Date:	2/9/2017
Site:	Plant Wansley	Location:	AP	Sampler's Name:	Taylor Payne
Well ID:	WGWC-9	Pump Type/Model:	QED Bladder	Sample Collection Time:	1055
Total Depth (ft):	60.74	Tubing Material:	LDPE	Sample Purge Rate (mL/min) <sup>2,3</sup> :	0.2
Depth to Water (ft):	12.75	Pump Intake Depth (ft):	55	Sample ID:	WGWC-9
Well Diameter (in):	2	Start/Stop Purge Time:	1011/1046	Laboratory Analyses:	metals, radium, inorganics
Well Volume (gal) = 0.041d <sup>2</sup> h:		Purge Rate (mL/min) <sup>1</sup> :	0.25 , 0.20	Total Purge Volume (L):	6.75
Well Volume (L) = gal * 3.785:		Purge Method:	Low-Flow Well Volume Other:	QA/QC Collected?	No
d = well diameter (inches) h = length of water column (feet)		Sampling Method <sup>3</sup> :	Pump Discharge Other:	QA/QC I.D.	NA
Well Type:	Flush	Stick Up			
Well Lock:	Yes	No			
Well Cap Condition:	Good	Replace			
Well Tag Present:	Yes	No			

All sample containers requiring chemical preservation properly preserved prior to demob from well?<sup>8</sup>    Yes    No

Time	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H <sub>2</sub> O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1021	17.64	197.7	2.58	6.25	74.6	4.28	250	1.25	17.2	SmaTROLL skipped reading at 1016
1026	16.16	196.3	2.48	6.10	69.8	3.46	250	2.50	17.25	
1031	16.25	195.9	2.32	6.05	66.3	3.25	250	3.75	17.4	
1036	15.90	193.2	2.17	6.02	64.3	2.45	200	4.75	17.44	
1041	15.75	192.2	2.14	6.04	66.1	1.75	200	5.75	17.44	
1046	15.66	192.0	2.17	6.03	61.0	1.99	200	6.75	17.44	
										Well Stable @1046
										Sampled @ 1055
<b>Stabilizing Criteria<sup>4, 5</sup></b>		<b>+/- 5%</b>	0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater) <sup>9</sup>	<b>+/- 0.1 SU</b>		<b>&lt; 5 NTUs</b>	<b>&gt; 100 mL &lt; 250 mL</b>	<b>&gt; 3L</b>	<b>&lt; 0.33 ft<sup>6, 7</sup></b>	

(1) - Maximum purge rate of 250 mL/min  
(2) - Sample rate to be between 100 mL/min and 250 mL/min  
(3) - Collect sample from pump discharge without tubing contacting sample container  
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.  
(5) - Stabilization criteria based on three most recent consecutive measurements.  
(6) - Monitor depth to water every 3 to 5 minutes. Well drawdown to be 0.33 ft or less within 3 consecutive readings. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft per 3 readings.  
(7) - Contact field team lead if drawdown > 0.33 ft - do not switch to 3 well volume method until instructed  
(8) - Preserve all samples as appropriate immediately following collection  
(9) - DO 0.2 mg/L or 10% whichever is greater (no criteria apply if DO < 0.5 mg/L)

**\*Note: Revised from handwritten field log recorded on 02/09/2017**



Product Name: Low-Flow System

Date: 2017-02-23 11:32:08

Project Information:

Operator Name T. Payne and C. Hurdle  
Company Name ERM  
Project Name GPC-Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 463068  
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 57 ft

Pump placement from TOC 38 ft

Well Information:

Well ID WGWC-14A  
Well diameter 2 in  
Well Total Depth 42.95 ft  
Screen Length 10 ft  
Depth to Water 13.76 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.4944151 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 8.88 in  
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 3%	+/- 5		+/- 10%	+/- 10
Last 5	11:06:50	600.02	16.83	5.57	121.84	1.16	14.33	0.49	47.30
Last 5	11:11:50	900.02	16.88	5.71	119.83	1.10	14.41	0.38	40.09
Last 5	11:16:50	1200.02	16.83	5.78	118.83	1.77	14.46	0.33	35.63
Last 5	11:21:50	1500.02	16.74	5.82	119.12	0.69	14.49	0.30	30.97
Last 5	11:26:50	1799.97	16.83	5.80	118.03	3.27	14.50	0.28	30.07
Variance 0			-0.05	0.08	-1.01			-0.05	-4.46
Variance 1			-0.09	0.03	0.29			-0.04	-4.66
Variance 2			0.09	-0.02	-1.09			-0.02	-0.90

Notes

Weather: 68F Mostly Cloudy. Purge Time: 1056/1126.

Grab Samples

WGWC-14A

Sample Time 1130

DUP-1

QA/QC

Product Name: Low-Flow System

Date: 2017-03-13 15:49:27

Project Information:

Operator Name Markevious Thomas  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364452  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter .375 in  
Tubing Length 130 ft

Pump placement from TOC 121.6 ft

Well Information:

Well ID WGWA-1  
Well diameter 2 in  
Well Total Depth 129.6 ft  
Screen Length 10 ft  
Depth to Water 26.06 ft

Pumping Information:

Final Pumping Rate 225 mL/min  
Total System Volume 3.288424 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.5 in  
Total Volume Pumped 5.625 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	15:25:18	300.10	16.08	6.61	33.26	0.41	26.08	0.49	54.78
Last 5	15:30:18	599.85	16.76	5.47	34.24	1.96	26.10	1.41	48.24
Last 5	15:35:18	899.85	16.91	5.41	34.37	1.26	26.10	1.35	44.21
Last 5	15:40:18	1199.85	16.93	5.42	34.46	1.18	26.10	1.33	42.49
Last 5	15:45:18	1499.85	16.96	5.40	34.58	0.71	26.10	1.33	41.38
Variance 0			0.16	-0.05	0.13			-0.06	-4.03
Variance 1			0.02	0.01	0.09			-0.02	-1.72
Variance 2			0.03	-0.03	0.12			-0.01	-1.10

Notes

1520 start purge at 225mL/min; 1545 all parameters stable; 1550 sampled at 225mL/min. 42F Overcast light drizzle

Grab Samples

WGWA-1  
Sampled at 1550

Product Name: Low-Flow System

Date: 2017-03-13 15:58:13

Project Information:

Operator Name T. Payne  
Company Name ERM  
Project Name GPC - Wansley  
Site Name Ash Pond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 449622  
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Dedicated QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 103 ft

Pump placement from TOC 99 ft

Well Information:

Well ID WGWA-2  
Well diameter 2 in  
Well Total Depth 104.9 ft  
Screen Length 10 ft  
Depth to Water 8.79 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.7997326 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 8.4 in  
Total Volume Pumped 6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	15:35:37	300.10	15.21	6.45	157.06	4.53	9.49	0.66	84.68
Last 5	15:40:37	600.02	14.53	6.27	147.93	4.57	9.49	0.48	80.03
Last 5	15:45:37	900.02	14.67	6.23	141.69	3.36	9.49	0.20	77.44
Last 5	15:50:37	1200.03	14.64	6.20	140.71	3.25	9.49	0.16	76.38
Last 5	15:55:37	1500.02	14.72	6.18	142.58	1.20	9.49	0.14	75.53
Variance 0			0.14	-0.04	-6.23			-0.28	-2.59
Variance 1			-0.04	-0.03	-0.98			-0.04	-1.05
Variance 2			0.08	-0.01	1.86			-0.01	-0.85

Notes

Begin purging well at 1530. Well stable at 1555. Sample at 1605. Sample rate 0.25L/min. Weather is cloudy.

Grab Samples

WGWA-2  
1605

Product Name: Low-Flow System

Date: 2017-03-14 12:19:53

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC-Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 449474  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type QED Dedicated Bladder  
Tubing Type Teflon/LDPE  
Tubing Diameter 0.25 in  
Tubing Length 24 ft

Pump placement from TOC 14 ft

Well Information:

Well ID WGWA-3  
Well diameter 2 in  
Well Total Depth 19 ft  
Screen Length 10 ft  
Depth to Water 3.51 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.7166655 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.12 in  
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10%
Last 5	11:58:20	300.09	15.38	5.86	35.02	0.47	3.52	5.68	88.91
Last 5	12:03:19	600.03	15.60	5.62	34.93	0.20	3.52	5.63	93.50
Last 5	12:08:19	900.03	15.65	5.53	34.91	0.93	3.52	5.61	94.76
Last 5	12:13:19	1199.99	15.67	5.53	34.84	0.23	3.52	5.60	93.67
Last 5									
Variance 0			0.22	-0.24	-0.10			-0.05	4.59
Variance 1			0.05	-0.09	-0.02			-0.02	1.26
Variance 2			0.01	-0.00	-0.07			-0.02	-1.09

Notes

Weather: 42F Cloudy. Purge Time: 1152/1212.

Grab Samples

WGWA-3  
Sample Time 1215

Product Name: Low-Flow System

Date: 2017-03-14 12:14:46

Project Information:

Operator Name Markevious Thomas  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364452  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated QED Bladder  
Tubing Type teflon  
Tubing Diameter .25 in  
Tubing Length 80 ft

Pump placement from TOC 68 ft

Well Information:

Well ID WGWA-4  
Well diameter 2 in  
Well Total Depth 73.1 ft  
Screen Length 10 ft  
Depth to Water 5.31 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 1.257218 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 14 in  
Total Volume Pumped 6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:50:41	299.99	15.24	6.54	144.72	1.42	5.88	0.31	56.31
Last 5	11:55:41	599.92	15.84	6.68	145.38	1.89	6.20	0.17	34.39
Last 5	12:00:41	899.92	15.87	6.71	143.41	1.03	6.34	0.10	20.81
Last 5	12:05:41	1199.92	15.88	6.73	142.28	0.90	6.39	0.08	10.71
Last 5	12:10:41	1499.92	15.89	6.75	141.62	0.62	6.49	0.07	1.29
Variance 0			0.03	0.03	-1.96			-0.07	-13.58
Variance 1			0.01	0.02	-1.13			-0.03	-10.11
Variance 2			0.01	0.02	-0.66			-0.01	-9.42

Notes  
1150 start purge at 250mL/min; 1210 all parameters stable; 1215 sampled at 250mL/min. 45F Cloudy, light wind

Grab Samples  
WGWA-4  
Sampled at 1215

Product Name: Low-Flow System

Date: 2017-03-14 12:33:10

Project Information:

Operator Name T. Payne  
Company Name ERM  
Project Name GPC - Wansley  
Site Name Ash Pond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 449622  
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Dedicated QED Bladder  
Tubing Type Tephlon  
Tubing Diameter 0.17 in  
Tubing Length 28 ft

Pump placement from TOC 20 ft

Well Information:

Well ID WGWA-5  
Well diameter 2 in  
Well Total Depth 23.19 ft  
Screen Length 10 ft  
Depth to Water 14.16 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.6099758 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 5.4 in  
Total Volume Pumped 17.8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:10:22	9599.86	14.67	5.88	27.60	--	--	6.57	120.95
Last 5	12:15:22	9899.87	14.15	5.90	27.91	--	--	6.77	120.49
Last 5	12:20:22	10199.86	13.75	5.92	27.79	4.77	14.61	6.68	121.01
Last 5	12:25:22	10499.86	14.49	5.88	28.12	4.48	14.61	6.71	122.47
Last 5	12:30:22	10799.86	15.21	5.86	28.11	3.93	14.61	6.83	122.85
Variance 0			-0.41	0.01	-0.12			-0.09	0.52
Variance 1			0.75	-0.04	0.32			0.03	1.46
Variance 2			0.72	-0.02	-0.01			0.12	0.38

Notes

Begin purging 3 well volumes at 0930. Purge rate 0.1L/min. Finish purging 3rd well volume at 1218. Well stable at 1230. Sample at 1240. Sample rate 0.1L/min. Weather is cloudy.

Grab Samples

WGWA-5  
1240





Product Name: Low-Flow System

Date: 2017-03-14 11:00:36

Project Information:

Operator Name Markevious Thomas  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364452  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter .17 in  
Tubing Length 45 ft

Pump placement from TOC 34 ft

Well Information:

Well ID WGWA-7  
Well diameter 2 in  
Well Total Depth 39.6 ft  
Screen Length 10 ft  
Depth to Water 28.65 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.665854 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 5 in  
Total Volume Pumped 20 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:30:18	2101.88	15.60	5.41	28.30	0.31	29.16	7.98	62.94
Last 5	10:35:18	2401.88	15.67	5.47	27.80	0.35	29.16	7.96	60.42
Last 5	10:40:18	2701.88	15.16	5.40	27.69	0.26	28.93	7.90	62.11
Last 5	10:45:18	3001.88	15.09	5.42	26.93	0.20	28.90	7.92	60.11
Last 5	10:50:18	3301.88	14.59	5.82	0.00	--	--	9.48	33.05
Variance 0			-0.51	-0.06	-0.11			-0.05	1.68
Variance 1			-0.07	0.01	-0.76			0.02	-1.99
Variance 2			-0.50	0.41	-26.93			1.56	-27.06

Notes

1000 start purge at 250mL/min; 1005 increase purge rate to 500mL/min; 1035 reduce purge rate to 250mL/min; 1045 3 well volumes purged, all parameters stable; 1050 sampled at 250mL/min. 44F Overcast light wind. \*SmartTroll was not stopped, recorded at 1050 while pump was disconnected from flow-cell.

Grab Samples  
WGWA-7  
Sampled at 1050

Product Name: Low-Flow System

Date: 2017-03-14 10:48:13

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC-Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 449474  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type QED Dedicated Bladder  
Tubing Type Teflon/LDPE  
Tubing Diameter 0.375 in  
Tubing Length 45 ft

Pump placement from TOC 35 ft

Well Information:

Well ID WGWA-18  
Well diameter 2 in  
Well Total Depth 40 ft  
Screen Length 10 ft  
Depth to Water 20.80 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 1.462339 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 29.4 in  
Total Volume Pumped 4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10%
Last 5	10:14:10	900.03	14.41	6.59	176.14	1.98	22.87	0.36	3.54
Last 5	10:24:10	1499.97	14.67	6.47	155.44	0.67	23.31	0.76	9.32
Last 5	10:29:10	1799.97	14.32	6.46	150.90	0.55	23.08	0.83	10.60
Last 5	10:34:10	2099.96	13.96	6.42	153.83	0.42	23.25	0.94	10.04
Last 5	10:39:10	2399.96	14.35	6.45	147.06	0.45	23.25	0.86	11.03
Variance 0			-0.36	-0.01	-4.54			0.07	1.28
Variance 1			-0.36	-0.04	2.93			0.11	-0.56
Variance 2			0.39	0.03	-6.77			-0.08	0.98

Notes

Weather: 42F Cloudy. Purge Time: 1000/1040. Began purge @ 200mL/min, but reduced to 100mL/min due to drawdown.

Grab Samples

WGWA-18  
Sample Time 1045



## GROUNDWATER SAMPLING LOG SHEET

Client:	GPC	Project No.:	0372406	Sampling Date:	3/14/2017
Site:	Plant Wansley	Location:	AP	Sampler's Name:	Taylor Payne
Well ID:	WGWA-6	Pump Type/Model:	QED Bladder	Sample Collection Time:	1441
Total Depth (ft):	104.5	Tubing Material:	LDPE	Sample Purge Rate (mL/min) <sup>2,3</sup> :	0.25
Depth to Water (ft):	14.44	Pump Intake Depth (ft):	99.5	Sample ID:	WGWA-6
Well Diameter (in):	2	Start/Stop Purge Time:	1326 to 1436	Laboratory Analyses:	metals, radium, inorganics
Well Volume (gal) = 0.041d <sup>2</sup> h:	14.77	Purge Rate (mL/min) <sup>1</sup> :	0.25	Total Purge Volume (L):	17.5
Well Volume (L) = gal * 3.785:	55.9	Purge Method:	Low-Flow Well Volume Other:	QA/QC Collected?	No
d = well diameter (inches) h = length of water column (feet)		Sampling Method <sup>3</sup> :	Pump Discharge Other:	QA/QC I.D.	NA

Well Type:	Flush	Stick Up
Well Lock:	Yes	No
Well Cap Condition:	Good	Replace
Well Tag Present:	Yes	No

All sample containers requiring chemical preservation properly preserved prior to demob from well?<sup>8</sup>    Yes    No

Time	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H <sub>2</sub> O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1331	15.89	172.4	0.39	7.28	100.3	0.45	250	1.25	15.81	
1336	15.57	171.5	0.15	7.57	92.3	0.50	250	2.50	15.85	
1341	15.75	172.0	0.13	7.72	86.9	2.21	250	3.75	15.97	
1346	15.71	172.5	0.15	7.83	82.6	0.87	250	5.00	15.99	
1351	14.76	167.8	0.18	7.93	78	0.64	250	6.25	15.99	
1356	13.59	170.7	0.25	7.98	77.5	0.86	250	7.50	16.00	
1406	13.97	138.0	2.02	7.70	82.7	1.14	250	10.00	16.00	SmaTROLL skipped reading at 1401
1411	14.93	134.4	1.76	7.51	82.5	1.22	250	11.25	16.01	
1416	15.06	134.4	1.67	7.41	82.2	1.35	250	12.50	16.11	
1421	15.23	134.5	1.58	7.34	81.2	0.86	250	13.75	16.14	
1426	15.17	134.2	1.45	7.30	79.5	0.93	250	15.00	16.14	
1431	15.21	134.0	1.49	7.27	76.6	0.99	250	16.25	16.14	
1436	15.23	134.1	1.48	7.25	75.4	1.05	250	17.50	16.14	
										Well stable at 1436
										Sampled at 1441
<b>Stabilizing Criteria<sup>4, 5</sup></b>		<b>+/- 5%</b>	0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater) <sup>9</sup>	<b>+/- 0.1 SU</b>		<b>&lt; 5 NTUs</b>	<b>&gt; 100 mL &lt; 250 mL</b>	<b>&gt; 3L</b>	<b>&lt; 0.33 ft<sup>6, 7</sup></b>	

(1) - Maximum purge rate of 250 mL/min  
 (2) - Sample rate to be between 100 mL/min and 250 mL/min  
 (3) - Collect sample from pump discharge without tubing contacting sample container  
 (4) - Field parameter measurements to be recorded every 3 to 5 minutes.  
 (5) - Stabilization criteria based on three most recent consecutive measurements.  
 (6) - Monitor depth to water every 3 to 5 minutes. Well drawdown to be 0.33 ft or less within 3 consecutive readings. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.33 ft per 3 readings.  
 (7) - Contact field team lead if drawdown > 0.33 ft - do not switch to 3 well volume method until instructed  
 (8) - Preserve all samples as appropriate immediately following collection  
 (9) - DO 0.2 mg/L or 10% whichever is greater (no criteria apply if DO < 0.5 mg/L)

**\*Note: Revised from handwritten field log recorded on 03/14/2017**

Product Name: Low-Flow System

Date: 2017-03-15 11:13:01

Project Information:

Operator Name T. Payne  
Company Name ERM  
Project Name GPC - Wansley  
Site Name Ash Pond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 449622  
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Dedicated QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 58 ft

Pump placement from TOC 54 ft

Well Information:

Well ID WGWC-8  
Well diameter 2 in  
Well Total Depth 59.4 ft  
Screen Length 10 ft  
Depth to Water 2.69 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.7438785 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 15.36 in  
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:50:39	1200.04	10.45	5.91	504.33	0.81	3.97	1.35	108.55
Last 5	10:55:39	1500.04	10.36	5.88	516.42	0.67	3.97	1.75	108.38
Last 5	11:00:39	1800.03	10.83	5.81	521.60	0.43	3.97	1.75	108.09
Last 5	11:05:39	2100.03	10.85	5.78	524.16	0.49	3.97	1.64	107.73
Last 5	11:10:39	2400.03	10.58	5.77	523.52	0.53	3.97	1.61	107.90
Variance 0			0.47	-0.06	5.19			-0.00	-0.28
Variance 1			0.03	-0.04	2.55			-0.11	-0.37
Variance 2			-0.27	-0.01	-0.63			-0.04	0.17

Notes

Begin purging at 1030. Purge rate 0.1L/min. Well stable at 1110. Sample at 1120. Sample rate 0.1L/min. Weather sunny.

Grab Samples

WGWC-8  
1120

Product Name: Low-Flow System

Date: 2017-03-15 14:33:33

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC-Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 449474  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type QED Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 66.42 ft

Pump placement from TOC 56.41 ft

Well Information:

Well ID WGWC-9  
Well diameter 2 in  
Well Total Depth 61.42 ft  
Screen Length 10 ft  
Depth to Water 14.3 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.3864606 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 46.32 in  
Total Volume Pumped 5.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10%
Last 5	14:09:24	2700.02	12.49	5.99	155.39	1.47	17.74	1.09	59.75
Last 5	14:14:24	3000.02	12.03	6.00	153.07	2.13	17.88	1.11	60.16
Last 5	14:19:24	3299.98	12.54	5.98	153.41	0.96	17.99	1.11	60.17
Last 5	14:24:24	3599.98	12.49	5.99	150.89	2.43	18.09	1.09	60.32
Last 5	14:29:24	3899.98	11.94	5.99	146.90	1.40	18.16	1.08	59.89
Variance 0			0.51	-0.02	0.34			-0.00	0.01
Variance 1			-0.05	0.01	-2.51			-0.02	0.15
Variance 2			-0.55	-0.00	-3.99			-0.02	-0.44

Notes

Weather: 40F sunny. Purge Time: 1430.

Grab Samples

WGWC-9  
Sample Time 1435

Product Name: Low-Flow System

Date: 2017-03-15 12:00:14

Project Information:

Operator Name Markevious Thomas  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364452  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter .25 in  
Tubing Length 150 ft

Pump placement from TOC 141 ft

Well Information:

Well ID WGWC-10  
Well diameter 2 in  
Well Total Depth 147.16 ft  
Screen Length 10 ft  
Depth to Water 19.85 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 1.93291 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 71 in  
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond µS/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:25:11	1200.03	14.99	6.76	87.31	1.42	23.40	4.63	71.60
Last 5	11:30:12	1501.02	15.05	6.79	87.07	0.52	24.29	4.60	71.41
Last 5	11:35:12	1801.02	15.12	6.79	87.14	0.37	24.83	4.58	71.34
Last 5	11:40:12	2101.03	15.07	6.76	86.83	0.42	25.41	4.55	72.52
Last 5	11:45:12	2401.02	15.15	6.82	86.26	0.28	25.78	4.44	71.42
Variance 0			0.08	-0.00	0.07			-0.02	-0.07
Variance 1			-0.05	-0.03	-0.31			-0.03	1.18
Variance 2			0.08	0.06	-0.56			-0.11	-1.10

Notes  
1105 start purge at 250mL/min; 1145 all parameters stable; 1150 sampled at 250mL/min. 36F sunny and windy

Grab Samples  
WGWC-10  
Sampled at 1150



Product Name: Low-Flow System

Date: 2017-03-15 10:18:11

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC-Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 449474  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type QED Dedicated Bladder  
Tubing Type Teflon/LDPE  
Tubing Diameter 0.375 in  
Tubing Length 54.5 ft

Pump placement from TOC 44.5 ft

Well Information:

Well ID WGWC-11  
Well diameter 2 in  
Well Total Depth 49.5 ft  
Screen Length 10 ft  
Depth to Water 28.45 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 1.668666 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 24.36 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10%
Last 5	09:49:53	2702.03	13.22	6.04	60.43	4.22	31.43	5.50	91.07
Last 5	09:54:53	3002.02	11.73	6.04	60.61	3.40	30.96	5.84	89.07
Last 5	09:59:53	3301.97	11.52	6.03	60.25	1.75	30.55	6.20	90.83
Last 5	10:04:53	3601.97	11.60	6.01	59.01	1.43	30.52	6.16	90.88
Last 5	10:09:53	3901.97	12.16	5.97	58.96	1.42	30.48	6.16	92.56
Variance 0			-0.21	-0.01	-0.37			0.36	1.76
Variance 1			0.08	-0.02	-1.24			-0.04	0.05
Variance 2			0.56	-0.04	-0.04			0.00	1.67

Notes

Weather: 30F mostly sunny. Purge Time: 0905/1010

Grab Samples

WGWC-11

Sample Time 1015

Product Name: Low-Flow System

Date: 2017-03-15 11:55:14

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC-Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 449474  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type QED Dedicated Bladder  
Tubing Type Teflon/LDPE  
Tubing Diameter 0.25 in  
Tubing Length 81.5 ft

Pump placement from TOC 71.5 ft

Well Information:

Well ID WGWC12  
Well diameter 2 in  
Well Total Depth 76.5 ft  
Screen Length 10 ft  
Depth to Water 27.34 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.271698 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10%
Last 5	11:30:01	1799.98	15.26	6.24	152.28	1.78	27.65	1.28	15.41
Last 5	11:35:01	2099.98	15.35	6.25	152.01	1.74	27.65	0.74	12.37
Last 5	11:40:01	2399.98	14.70	6.35	145.06	1.94	27.58	0.85	12.13
Last 5	11:45:01	2699.98	15.13	6.29	151.22	1.58	27.66	0.31	7.63
Last 5	11:50:01	2999.98	15.43	6.30	151.02	1.50	27.64	0.23	5.72
Variance 0			-0.66	0.10	-6.95			0.11	-0.24
Variance 1			0.43	-0.06	6.16			-0.54	-4.50
Variance 2			0.31	0.01	-0.20			-0.08	-1.91

Notes

Weather: 34F Sunny. Purge Time 1100/1150. Extra Radium collected.

Grab Samples

WGWC-12

Sample Time 1155

WGWC-12

Extra Radium

Product Name: Low-Flow System

Date: 2017-03-15 09:16:02

Project Information:

Operator Name T. Payne  
Company Name ERM  
Project Name GPC - Wansley  
Site Name Ash Pond  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 449622  
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Dedicated QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 95 ft

Pump placement from TOC 91 ft

Well Information:

Well ID WGWC-13  
Well diameter 2 in  
Well Total Depth 96.31 ft  
Screen Length 10 ft  
Depth to Water 14.11 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.9090251 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 23.16 in  
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	08:51:16	600.03	12.32	6.58	115.32	1.68	15.49	1.63	85.19
Last 5	08:56:16	900.02	12.94	6.63	131.05	4.52	16.04	1.11	85.67
Last 5	09:01:16	1200.02	10.55	6.74	128.16	3.42	16.01	0.96	84.59
Last 5	09:06:16	1500.02	8.68	6.76	131.82	2.23	16.01	0.96	85.20
Last 5	09:11:16	1800.04	8.14	6.75	133.70	3.21	16.01	0.89	85.29
Variance 0			-2.40	0.11	-2.89			-0.15	-1.08
Variance 1			-1.87	0.02	3.66			0.00	0.62
Variance 2			-0.54	-0.01	1.89			-0.07	0.09

Notes

Begin purging at 0841. Initial purge rate 0.1L/min. Increase purge rate to 0.2L/min. Decrease purge rate to 0.1L/min at 0856 due to excessive drawdown. Well stable at 0911. Sample at 0920. Sample rate 0.1L/min. Weather is sunny.

Grab Samples

WGWC-13  
0920

Product Name: Low-Flow System

Date: 2017-03-17 10:01:11

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC-Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 449474  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type QED Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 47.96 ft

Pump placement from TOC 37.96 ft

Well Information:

Well ID WGWC-14A  
Well diameter 2 in  
Well Total Depth 42.96 ft  
Screen Length 10 ft  
Depth to Water 14.96 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 0.3040658 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 14.28 in  
Total Volume Pumped 3.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10%
Last 5	09:40:31	300.17	13.88	5.98	145.53	1.39	15.81	0.42	35.73
Last 5	09:45:31	600.03	13.94	5.96	140.86	1.62	16.01	0.29	34.26
Last 5	09:50:31	900.02	13.85	5.96	139.33	0.90	16.10	0.24	32.52
Last 5	09:55:31	1200.02	14.00	5.97	137.81	1.38	16.15	0.20	30.57
Last 5									
Variance 0			0.06	-0.02	-4.67			-0.13	-1.47
Variance 1			-0.09	0.00	-1.53			-0.05	-1.73
Variance 2			0.15	0.01	-1.52			-0.03	-1.95

Notes

Weather: 42F Cloudy. Purge Time: 0935/0955.

Grab Samples

WGWC-14A

Sample Time 1000

Product Name: Low-Flow System

Date: 2017-03-14 15:07:53

Project Information:

Operator Name Markevious Thomas  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364452  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type Teflon  
Tubing Diameter .25 in  
Tubing Length 60 ft

Pump placement from TOC 51 ft

Well Information:

Well ID WGWC-15  
Well diameter 2 in  
Well Total Depth 56 ft  
Screen Length 10 ft  
Depth to Water 9.46 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 1.064164 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 309 in  
Total Volume Pumped 28.125 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:20:08	3899.90	17.46	7.46	274.53	1.23	32.76	0.48	-49.43
Last 5	14:25:08	4199.90	17.45	7.52	274.61	1.01	33.27	0.45	-52.91
Last 5	14:35:08	4799.90	17.51	7.54	274.06	1.30	34.64	0.45	-59.88
Last 5	14:40:08	5099.90	17.38	7.55	271.05	0.99	35.20	0.45	-62.02
Last 5	14:45:08	5399.84	16.44	7.57	268.07	0.56	35.20	0.45	-61.93
Variance 0			0.05	0.03	-0.55			0.00	-6.97
Variance 1			-0.13	0.01	-3.01			-0.00	-2.14
Variance 2			-0.93	0.02	-2.97			0.00	0.09

Notes

1315 start purge at 250mL/min; 1345 increase purge rate to 500 mL/min;1350 SmarTroll did not log; 1410 decrease purge rate to 250mL/min; 1430 SmarTroll did not log; 1440 decrease purge rate to 125mL/min; 1445 all parameters stable; 1450 Sampled at 250mL/min. 44F Overcast

Grab Samples

WGWC-15

Sampled at 1450

Product Name: Low-Flow System

Date: 2017-03-15 10:14:14

Project Information:

Operator Name Markevious Thomas  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364452  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type Teflon  
Tubing Diameter .25 in  
Tubing Length 35 ft

Pump placement from TOC 30 ft

Well Information:

Well ID WGWC-16  
Well diameter 2 in  
Well Total Depth 35 ft  
Screen Length 10 ft  
Depth to Water 9.92 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.8228456 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:40:53	300.17	15.71	5.75	1866.07	9.32	8.99	0.76	114.53
Last 5	09:45:53	600.03	16.20	5.47	1896.63	2.90	8.99	0.60	107.61
Last 5	09:50:53	900.02	16.30	5.43	1907.29	1.44	8.99	0.45	104.33
Last 5	09:55:53	1200.02	16.24	5.39	1919.46	0.73	8.99	0.36	103.35
Last 5	10:00:53	1500.03	16.20	5.39	1916.86	0.52	9.00	0.32	103.15
Variance 0			0.09	-0.05	10.66			-0.15	-3.28
Variance 1			-0.05	-0.03	12.16			-0.09	-0.98
Variance 2			-0.04	-0.00	-2.60			-0.04	-0.20

Notes

0935 start purge at 250mL/min; 1000 all parameters stable; 1005 sampled at 250mL/min. 28F Sunny and windy. \*Correction: initial depth to water 8.92ft btoc

Grab Samples

WGWC-16

Sampled at 1005

Product Name: Low-Flow System

Date: 2017-03-14 14:18:37

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC-Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 449474  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type QED Dedicated Bladder  
Tubing Type Teflon/LDPE  
Tubing Diameter 0.25 in  
Tubing Length 101 ft

Pump placement from TOC 91 ft

Well Information:

Well ID WGWC-17  
Well diameter 2 in  
Well Total Depth 96.16 ft  
Screen Length 10 ft  
Depth to Water 20.19 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 1.459926 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 27.12 in  
Total Volume Pumped 9.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10%
Last 5	13:52:07	2700.02	15.35	6.24	141.02	0.58	22.45	1.25	15.19
Last 5	13:57:07	2999.97	15.40	6.24	138.58	0.77	22.45	1.32	16.51
Last 5	14:02:07	3299.97	15.42	6.24	136.67	0.61	22.45	1.46	17.40
Last 5	14:07:07	3599.97	15.59	6.25	134.24	0.61	22.45	1.57	18.30
Last 5	14:12:07	3899.97	15.66	6.27	132.44	0.70	22.45	1.65	19.75
Variance 0			0.03	0.00	-1.91			0.13	0.89
Variance 1			0.16	0.01	-2.43			0.11	0.90
Variance 2			0.07	0.02	-1.80			0.09	1.45

Notes

Weather: 43F Cloudy. Purge Time: 1307/1412.

Grab Samples

WGWC-17

Sample Time 1415

Product Name: Low-Flow System

Date: 2017-03-15 10:13:37

Project Information:

Operator Name Jim Morrison  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP / Carrollton, GA  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 456959  
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter .375 in  
Tubing Length 95 ft

Pump placement from TOC 89 ft

Well Information:

Well ID WGWC-19  
Well diameter 2 in  
Well Total Depth 94.8 ft  
Screen Length 10 ft  
Depth to Water 21.22 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 2.548271 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 15.36 in  
Total Volume Pumped 8.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	09:47:05	900.03	14.46	6.73	138.75	2.88	22.49	0.31	29.06
Last 5	09:52:05	1200.03	12.99	6.77	134.27	3.01	22.33	0.33	32.60
Last 5	09:57:05	1500.02	14.13	6.75	138.13	3.56	22.44	0.21	30.97
Last 5	10:02:05	1800.03	14.63	6.77	138.80	2.11	22.62	0.24	31.45
Last 5	10:07:05	2100.03	13.77	6.78	139.06	2.24	22.50	0.25	33.15
Variance 0			1.14	-0.02	3.86			-0.11	-1.63
Variance 1			0.50	0.02	0.68			0.03	0.48
Variance 2			-0.87	0.01	0.26			0.01	1.70

Notes

Purged 8.75 liters at 250 mL/min. Parameters stable at 1007. Collect sample WGWC-19 and DUP-2 at 1020. Windy and clear 28 degrees. Sample at 250 mL/min

Grab Samples

WGWC-19  
Primary



Product Name: Low-Flow System

Date: 2017-04-11 15:26:20

Project Information:

Operator Name M Burch  
Company Name ERM  
Project Name GPC WANSLEY  
Site Name Default Site  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 449622  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type Idpe  
Tubing Diameter 0.175 in  
Tubing Length 65 ft

Pump placement from TOC 55 ft

Well Information:

Well ID WGWC-9  
Well diameter 2 in  
Well Total Depth 60.72 ft  
Screen Length 10 ft  
Depth to Water 13.46 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.5474395 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 28.08 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 3%	+/- 5		+/- 0.3	+/- 10
Last 5	15:02:37	300.10	21.67	6.22	154.09	1.20	15.60	2.22	92.55
Last 5	15:07:37	600.02	21.55	6.18	153.11	1.61	15.73	2.18	86.49
Last 5	15:12:37	900.02	21.54	6.12	151.42	0.76	15.74	2.13	86.81
Last 5	15:17:37	1200.02	21.59	6.07	150.98	0.67	15.73	2.11	88.17
Last 5	15:22:37	1500.02	21.53	6.04	148.81	0.71	15.80	2.09	89.63
Variance 0			-0.01	-0.05	-1.69			-0.05	0.33
Variance 1			0.05	-0.05	-0.45			-0.02	1.36
Variance 2			-0.06	-0.03	-2.17			-0.02	1.46

Notes

Started purging at 200mL @1458  
Stopped purging at 1523 at 200mL/min

Grab Samples

WGWC-9  
Grabbed Sample at 1528 at 200mL/min Took Dup-1 from this well also

Product Name: Low-Flow System

Date: 2017-04-11 14:04:19

Project Information:

Operator Name Taylor Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 501336  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 46 ft

Pump placement from TOC 38 ft

Well Information:

Well ID WGWC-14A  
Well diameter 2 in  
Well Total Depth 42.95 ft  
Screen Length 10 ft  
Depth to Water 13.26 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.4453174 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 13.32 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:41:54	300.10	19.59	6.11	135.60	0.54	14.08	0.46	66.48
Last 5	13:46:54	600.03	19.08	6.13	134.65	0.56	14.30	0.32	57.37
Last 5	13:51:54	900.03	18.78	6.15	133.52	0.44	14.34	0.27	51.98
Last 5	14:01:54	1500.02	19.40	6.18	137.41	0.39	14.37	0.21	42.46
Last 5									
Variance 0			-0.51	0.02	-0.95			-0.15	-9.11
Variance 1			-0.30	0.02	-1.13			-0.05	-5.39
Variance 2			0.62	0.04	3.89			-0.06	-9.52

Notes

Begin purging at 1336. Smartroll skipped reading at 1356. Well stable at 1401. Sample at 1405. Sample rate 0.2L/min. Weather is sunny.

Grab Samples

Product Name: Low-Flow System

Date: 2017-04-11 14:04:22

Project Information:

Operator Name M. Burch  
Company Name ERM  
Project Name GPC WANSLEY  
Site Name Default Site  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 449622  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter .375 in  
Tubing Length 99 ft

Pump placement from TOC 89 ft

Well Information:

Well ID WGWC-19  
Well diameter 2 in  
Well Total Depth 94.80 ft  
Screen Length 10 ft  
Depth to Water 20.90 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 2.390146 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 14.4 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 3%	+/- 5		+/- 0.3	+/- 10
Last 5	13:42:01	300.15	18.34	6.93	135.04	2.51	22.17	0.51	74.65
Last 5	13:47:01	600.02	18.48	6.87	134.00	2.12	22.10	0.28	73.82
Last 5	13:52:01	900.02	18.53	6.81	134.26	1.87	22.10	0.23	74.70
Last 5	13:57:01	1200.02	18.46	6.79	134.92	2.90	22.10	0.21	75.22
Last 5	14:02:01	1500.02	18.21	6.79	136.07	3.01	22.10	0.19	75.50
Variance 0			0.05	-0.06	0.27			-0.05	0.88
Variance 1			-0.07	-0.02	0.66			-0.01	0.52
Variance 2			-0.25	-0.00	1.15			-0.02	0.28

Notes

Started Purging @1337 @200mL/min  
Stopped Purging at 1402 @200mL/min

Grab Samples

WGWC-19  
Grabbed Sample at 1407 at 200mL/min

Product Name: Low-Flow System

Date: 2017-04-24 15:40:44

Project Information:

Operator Name T.Thomas  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364456  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter 0.375 in  
Tubing Length 134 ft

Pump placement from TOC 124 ft

Well Information:

Well ID WGWA-1  
Well diameter 2 in  
Well Total Depth 129.6 ft  
Screen Length 10 ft  
Depth to Water 25.44 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 3.395298 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 $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	15:18:01	600.03	17.85	5.49	35.45	0.36	25.44	2.31	257.90
Last 5	15:23:01	900.03	17.83	5.40	35.54	0.93	25.44	2.21	277.72
Last 5	15:28:01	1200.03	17.85	5.39	35.52	0.22	25.44	2.07	284.56
Last 5	15:33:01	1500.03	17.82	5.40	35.51	0.20	25.44	1.97	291.56
Last 5	15:38:01	1800.03	17.89	5.40	35.54	0.07	25.44	1.90	299.04
Variance 0			0.02	-0.00	-0.02			-0.14	6.85
Variance 1			-0.03	0.00	-0.01			-0.10	7.00
Variance 2			0.06	-0.00	0.03			-0.07	7.47

Notes

Purge started at 1508. Purge rate at 200ml/min.  
Parameters stable at 1538. Well sampled at 1545. Sample rate at 200 ml/min. Weather- overcast 61F.

Grab Samples

WGWA-1  
Sampled at 1545

Product Name: Low-Flow System

Date: 2017-04-24 16:04:02

Project Information:

Operator Name T. Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 449474  
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.375 in  
Tubing Length 100 ft

Pump placement from TOC 99 ft

Well Information:

Well ID WGWA-2  
Well diameter 2 in  
Well Total Depth 104.9 ft  
Screen Length 10 ft  
Depth to Water 9.19 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 2.656864 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 5.4 in  
Total Volume Pumped 11.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	15:41:56	1500.03	16.38	6.34	134.19	0.40	9.64	1.52	-9.53
Last 5	15:46:56	1800.03	16.38	6.31	134.91	0.52	9.64	0.75	-11.29
Last 5	15:51:56	2099.93	16.38	6.32	135.55	0.39	9.64	0.65	-12.11
Last 5	15:56:56	2399.93	16.38	6.33	137.48	0.15	9.64	0.54	-14.19
Last 5	16:01:56	2699.93	16.46	6.35	139.72	0.36	9.64	0.50	-15.27
Variance 0			0.00	0.01	0.64			-0.11	-0.82
Variance 1			-0.00	0.01	1.93			-0.10	-2.08
Variance 2			0.08	0.02	2.24			-0.04	-1.08

Notes

Begin purging at 1516. Stable at 1601. Sample at 1605. Sample rate 0.25L/min. Weather is cloudy.

Grab Samples

WGWA - 2  
1605

Product Name: Low-Flow System

Date: 2017-04-25 11:32:20

Project Information:

Operator Name M.Burch  
Company Name ERM  
Project Name GPC WANSLEY  
Site Name Default Site  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 365491  
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter 0.375 in  
Tubing Length 19 ft

Pump placement from TOC 14 ft

Well Information:

Well ID WGWA-3  
Well diameter 2 in  
Well Total Depth 19 ft  
Screen Length 10 ft  
Depth to Water 3.23 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.8926543 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 2.04 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	11:09:52	300.09	16.91	5.84	36.06	0.19	3.30	5.30	9.26
Last 5	11:14:52	600.03	16.91	5.72	36.06	0.17	3.35	5.30	3.30
Last 5	11:19:52	900.03	16.92	5.67	36.05	0.20	3.36	5.29	0.80
Last 5	11:24:52	1200.03	16.92	5.65	36.05	0.25	3.37	5.31	0.58
Last 5	11:29:52	1500.03	16.96	5.59	36.00	0.20	3.40	5.31	5.12
Variance 0			0.01	-0.05	-0.01			-0.01	-2.50
Variance 1			0.01	-0.02	0.00			0.01	-0.22
Variance 2			0.03	-0.06	-0.05			0.01	4.54

Notes

Starting Purge at 1105 @200mL/min

Grab Samples

WGWA-3

Grabbed Sample @1135 at 200mL/min

Product Name: Low-Flow System

Date: 2017-04-25 10:29:18

Project Information:

Operator Name M. Burch  
Company Name ERM  
Project Name GPC WANSLEY  
Site Name Default Site  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 365491  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter 0.375 in  
Tubing Length 73 ft

Pump placement from TOC 68 ft

Well Information:

Well ID WGWA-4  
Well diameter 2 in  
Well Total Depth 73.1 ft  
Screen Length 10 ft  
Depth to Water 4.75 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 2.065461 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.05 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 3%	+/- 5		+/- 0.3	+/- 10
Last 5	10:05:01	600.03	17.48	6.99	142.18	0.38	7.39	0.04	-41.17
Last 5	10:10:01	899.92	17.49	6.91	139.93	0.25	7.74	0.05	-53.01
Last 5	10:15:01	1199.92	17.27	6.86	139.75	0.25	7.78	0.06	-66.41
Last 5	10:20:01	1499.92	17.44	6.84	138.80	0.20	7.80	0.06	-73.75
Last 5	10:25:01	1799.92	17.37	6.84	138.76	0.21	7.80	0.06	-78.19
Variance 0			-0.22	-0.05	-0.18			0.01	-13.40
Variance 1			0.17	-0.02	-0.95			0.00	-7.34
Variance 2			-0.07	-0.01	-0.05			-0.00	-4.44

Notes

Starting Purge at 0955 at 200mL/min  
Stopped Purging @1025 at 200mL/min

Grab Samples

WGWA-4  
Grabbed Sample @ 1030 @200mL/min

Product Name: Low-Flow System

Date: 2017-04-25 12:20:35

Project Information:

Operator Name T.Thomas  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364456  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 28 ft

Pump placement from TOC 18 ft

Well Information:

Well ID WGWA-5  
Well diameter 2 in  
Well Total Depth 23.19 ft  
Screen Length 10 ft  
Depth to Water 12.88 ft

Pumping Information:

Final Pumping Rate 500 mL/min  
Total System Volume 0.2149758 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 10.56 in  
Total Volume Pumped 34.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:49:31	6928.91	18.52	5.32	25.42	8.70	13.18	6.38	875.90
Last 5	11:54:31	7228.91	18.57	5.34	25.71	8.50	13.18	6.14	855.74
Last 5	11:59:31	7528.91	18.52	5.34	25.96	8.61	13.18	6.08	844.56
Last 5	12:04:31	7828.91	18.69	5.34	25.39	8.31	13.18	6.05	836.54
Last 5	12:09:32	8129.92	18.91	5.35	25.42	8.09	13.18	6.04	828.98
Variance 0			-0.05	0.00	0.25			-0.06	-11.18
Variance 1			0.18	-0.00	-0.56			-0.03	-8.02
Variance 2			0.22	0.01	0.03			-0.01	-7.55

Notes

Water is within the screen. Three well volumes required. 1 well volume = 6.40 L. Purge rate started at 500 ml/min. Purge started at 0954. Water was within 1 foot of the screen requiring 3 well volume purge. Purge started at 500 ml/ min, lowered to 200ml/min at 1034. Rate lowered to 150 ml/min at 1109 to attempt to stabilize turbidity. Rate lowered at 1139 to 100ml/min. P. Robinson called at 1207 to discuss turbidity. P. Robinson gave permission to sample well even though turbidity is not less than 5 NTU. Parameters stable at 1209. Well sampled at 1220. Sample



Grab Samples  
WGWA-5  
Sampled at 1220

Product Name: Low-Flow System

Date: 2017-04-25 13:50:47

Project Information:

Operator Name T.Thomas  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364456  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter 0.375 in  
Tubing Length 109.5 ft

Pump placement from TOC 99.5 ft

Well Information:

Well ID WGWA-6  
Well diameter 2 in  
Well Total Depth 104.5 ft  
Screen Length 10 ft  
Depth to Water 14.15 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 2.863191 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 4.56 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:28:02	600.03	18.91	7.44	180.20	0.41	14.46	1.45	84.82
Last 5	13:33:02	900.03	17.84	7.58	180.13	0.72	14.48	0.64	99.38
Last 5	13:38:02	1200.03	17.58	7.67	180.49	0.19	14.48	0.26	84.77
Last 5	13:43:02	1499.97	17.44	7.71	180.69	0.20	14.48	0.20	74.11
Last 5	13:48:02	1799.96	17.35	7.73	181.02	0.14	14.48	0.18	64.41
Variance 0			-0.27	0.09	0.36			-0.38	-14.61
Variance 1			-0.13	0.04	0.20			-0.06	-10.66
Variance 2			-0.09	0.02	0.34			-0.03	-9.70

Notes

Purge started at 1318. Purge rate at 200ml/min.  
Parameters stable at 1348. Well sampled at 1400. DUP-1 sampled. Weather - partly cloudy 70 F.

Grab Samples

WGWA-6  
Sampled at 1400  
DUP-1

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Product Name: Low-Flow System

Date: 2017-04-25 13:57:17

Project Information:

Operator Name T. Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 449474  
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.175 in  
Tubing Length 47 ft

Pump placement from TOC 35 ft

Well Information:

Well ID WGWA-7  
Well diameter 2 in  
Well Total Depth 39.6 ft  
Screen Length 10 ft  
Depth to Water 26.66 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.4423024 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 1.2 in  
Total Volume Pumped 23 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 100
Last 5	13:34:36	6299.96	19.73	5.87	36.03	4.79	26.71	7.14	43.52
Last 5	13:39:36	6599.96	20.16	5.72	31.81	3.76	26.71	7.49	52.19
Last 5	13:44:36	6899.96	20.62	5.63	30.60	4.84	26.71	7.57	58.46
Last 5	13:49:36	7199.89	21.54	5.60	30.54	4.37	26.71	7.53	59.99
Last 5	13:54:36	7499.89	22.69	5.57	30.14	2.46	26.71	7.58	62.29
Variance 0			0.46	-0.09	-1.21			0.08	6.28
Variance 1			0.92	-0.03	-0.06			-0.04	1.52
Variance 2			1.15	-0.03	-0.40			0.05	2.30

Notes

Begin purging at 1149. Well stable at 1354. Sample at 1400. Sample rate 0.1L/min. Weather is sunny.

Grab Samples

WGWA-7  
1400

Product Name: Low-Flow System

Date: 2017-04-25 10:04:42

Project Information:

Operator Name T. Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 449474  
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.375 in  
Tubing Length 36 ft

Pump placement from TOC 35 ft

Well Information:

Well ID WGWA-18  
Well diameter 2 in  
Well Total Depth 40 ft  
Screen Length 10 ft  
Depth to Water 19.7 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 1.266871 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 18.96 in  
Total Volume Pumped 6.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:35:18	1200.03	16.70	6.98	181.80	1.61	21.02	3.63	-33.66
Last 5	09:40:18	1500.03	16.83	7.01	169.67	1.00	21.12	4.13	-22.00
Last 5	09:50:18	2100.02	16.71	7.00	161.82	1.27	21.19	4.12	-11.35
Last 5	09:55:18	2400.03	16.78	6.97	160.26	0.62	21.22	4.04	-8.69
Last 5	10:00:18	2700.03	16.78	6.93	159.22	0.55	21.28	3.89	-7.81
Variance 0			-0.12	-0.01	-7.84			-0.01	10.65
Variance 1			0.07	-0.03	-1.56			-0.09	2.66
Variance 2			0.00	-0.04	-1.04			-0.15	0.88

Notes

Begin purging at 0915. Well stable at 1000. Sample at 1010. Sample rate 0.15L/min. Weather is sunny.

Grab Samples

WGWA-18  
1010

Product Name: Low-Flow System

Date: 2017-04-26 14:17:29

Project Information:

Operator Name Myles Rogers  
Company Name ERM  
Project Name Plant Wansley GPC  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 365491  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter .375 in  
Tubing Length 59.5 ft

Pump placement from TOC 54.5 ft

Well Information:

Well ID WGWC-8  
Well diameter 2 in  
Well Total Depth 59.5 ft  
Screen Length 10 ft  
Depth to Water 3.5 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 1.502259 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 54.24 in  
Total Volume Pumped 8.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	14:04:59	300.10	18.75	5.45	579.12	0.29	8.07	1.25	-11.14
Last 5	14:09:59	600.03	18.47	5.40	580.04	0.25	8.00	1.28	-9.28
Last 5	14:14:59	900.03	18.34	5.39	577.58	0.31	8.02	1.29	-8.57
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.27	-0.05	0.92			0.03	1.85
Variance 2			-0.14	-0.01	-2.46			0.01	0.71

Notes

iPad overheated so I am restarting Purge. Previous data on handwritten log  
Parameters stable. Had to restart Purge because iPad overheated. Previous readings on paper log

Grab Samples

HGWC-8  
Sampling at 14:19

Product Name: Low-Flow System

Date: 2017-04-26 14:14:30

Project Information:

Operator Name T.Thomas  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 456959  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 66.42 ft

Pump placement from TOC 56.42 ft

Well Information:

Well ID WGWC-9  
Well diameter 2 in  
Well Total Depth 61.42 ft  
Screen Length 10 ft  
Depth to Water 13.53 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.3864606 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 42 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:50:06	2399.91	22.24	6.04	152.44	0.94	16.99	1.71	10.27
Last 5	13:55:06	2699.91	22.27	6.03	152.12	0.53	17.02	1.52	11.29
Last 5	14:00:06	2999.91	22.27	6.04	151.15	0.28	17.03	1.46	11.82
Last 5	14:05:06	3299.91	21.79	6.04	151.19	0.34	17.03	1.53	13.58
Last 5	14:10:06	3599.91	21.55	6.03	150.55	0.22	17.03	1.46	14.31
Variance 0			-0.00	0.00	-0.97			-0.06	0.54
Variance 1			-0.48	-0.00	0.04			0.06	1.76
Variance 2			-0.24	-0.00	-0.65			-0.07	0.73

Notes

Purge started at 1310. Purge rate at 200 ml/min.  
Purge rate lowered to 100 ml/min at 1320. Parameters stable at 1410. Well sampled at 1420. Sample rate at 100 ml/min. Weather - partly cloudy and windy 73F.

Grab Samples  
WGWC-9  
Sampled at 1420

Product Name: Low-Flow System

Date: 2017-04-26 12:15:52

Project Information:

Operator Name Myles Rogers  
Company Name ERM  
Project Name Plant Wansley GPC  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 365491  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter .375 in  
Tubing Length 147.16 ft

Pump placement from TOC 142.16 ft

Well Information:

Well ID WGWC-10  
Well diameter 2 in  
Well Total Depth 147.16 ft  
Screen Length 10 ft  
Depth to Water 18.92 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 3.406116 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 55.56 in  
Total Volume Pumped 3.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	11:52:22	299.97	17.22	6.76	89.13	3.98	22.18	4.61	-24.40
Last 5	11:57:22	599.96	17.21	6.78	89.23	3.91	22.96	4.58	-25.50
Last 5	12:02:22	899.96	17.22	6.77	89.31	4.50	23.30	4.59	-22.91
Last 5	12:07:23	1200.96	17.48	6.75	89.01	3.49	23.50	4.55	-20.17
Last 5	12:12:23	1500.96	17.47	6.73	89.09	2.33	23.55	4.50	-18.91
Variance 0			0.01	-0.01	0.08			0.01	2.59
Variance 1			0.26	-0.01	-0.29			-0.05	2.73
Variance 2			-0.01	-0.02	0.08			-0.04	1.26

Notes

Had trouble with pump when first starting. Was able to have it consistently pump at .150L/min

Grab Samples

WGWC-10-20170426-01  
Sampling at 1216. Taking FB-2 here



Product Name: Low-Flow System

Date: 2017-04-26 09:51:06

Project Information:

Operator Name T. Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 449474  
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.375 in  
Tubing Length 45.5 ft

Pump placement from TOC 44.5 ft

Well Information:

Well ID WGWC-11  
Well diameter 2 in  
Well Total Depth 49.5 ft  
Screen Length 10 ft  
Depth to Water 27.18 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 1.473198 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 19.8 in  
Total Volume Pumped 3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 100
Last 5	09:27:51	899.94	16.70	6.39	64.32	4.36	28.57	5.70	73.39
Last 5	09:32:51	1199.94	16.77	6.29	63.75	4.73	28.66	5.63	70.16
Last 5	09:37:51	1499.94	16.65	6.23	62.80	4.20	28.78	5.67	68.33
Last 5	09:42:51	1799.94	16.62	6.21	61.85	4.23	28.81	5.69	66.67
Last 5	09:47:51	2099.98	16.64	6.17	61.07	4.09	28.83	5.73	66.57
Variance 0			-0.12	-0.06	-0.95			0.04	-1.83
Variance 1			-0.03	-0.02	-0.96			0.02	-1.66
Variance 2			0.02	-0.04	-0.77			0.04	-0.10

Notes

Began purging at 0912. Well stable at 0947. Sample at 0955. Sample rate 0.1L/min. FB-2 taken at 1010. Weather is sunny.

Grab Samples

WGWC-11  
0955  
FB-2  
1010

Product Name: Low-Flow System

Date: 2017-04-26 13:35:27

Project Information:

Operator Name T. Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 449474  
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.375 in  
Tubing Length 72.5 ft

Pump placement from TOC 71.5 ft

Well Information:

Well ID WGWC-12  
Well diameter 2 in  
Well Total Depth 76.5 ft  
Screen Length 10 ft  
Depth to Water 26.18 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 2.059602 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 2.4 in  
Total Volume Pumped 22 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 100
Last 5	13:11:19	9299.89	17.77	6.67	145.91	10.90	26.38	0.23	-32.38
Last 5	13:16:19	9599.89	17.73	6.69	145.58	7.78	26.38	0.21	-32.16
Last 5	13:21:19	9899.89	17.72	6.68	145.59	4.95	26.38	0.21	-31.90
Last 5	13:26:22	10202.89	17.87	6.70	145.29	4.42	26.38	0.20	-33.14
Last 5	13:31:22	10502.82	18.12	6.67	144.71	4.58	26.38	0.20	-32.63
Variance 0			-0.01	-0.00	0.01			-0.00	0.27
Variance 1			0.15	0.01	-0.30			-0.02	-1.24
Variance 2			0.26	-0.03	-0.58			0.00	0.51

Notes

Begin purging at 1036. Initial purge rate 0.25L/min. Decrease purge rate to 0.15L/min at 1046. Decrease purge rate to 0.1L/min at 1056. Increase purge rate to 0.15L/min at 1241. Well stable at 1331. Sample at 1335. Sample rate 0.15L/min. Weather is sunny.

Grab Samples

WGWC-12  
1335

Product Name: Low-Flow System

Date: 2017-04-26 10:10:36

Project Information:

Operator Name T.Thomas  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 456959  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter 0.375 in  
Tubing Length 101 ft

Pump placement from TOC 91 ft

Well Information:

Well ID WGWC-13  
Well diameter 2 in  
Well Total Depth 96.31 ft  
Screen Length 10 ft  
Depth to Water 13.35 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 2.678583 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 40.08 in  
Total Volume Pumped 5.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:47:02	2099.97	16.61	6.57	124.73	0.98	16.13	0.44	39.26
Last 5	09:52:02	2399.97	16.65	6.56	124.22	1.03	16.49	0.37	40.93
Last 5	09:57:02	2699.97	16.70	6.56	124.05	1.60	16.62	0.32	41.84
Last 5	10:02:02	2999.97	16.74	6.56	123.56	1.73	16.68	0.30	42.16
Last 5	10:07:02	3299.97	16.77	6.57	123.21	1.02	16.69	0.28	41.72
Variance 0			0.05	0.00	-0.17			-0.04	0.91
Variance 1			0.05	0.00	-0.49			-0.02	0.32
Variance 2			0.03	0.00	-0.35			-0.02	-0.45

Notes

Purge started at 0912. Purge rate at 100 ml/min.  
Parameters stable at 1007. Well sampled at 1015. Sample rate at 100 ml/min. 2nd Rad taken.

Grab Samples

WGWC-13

Sampled at 1015

2nd Rad

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Product Name: Low-Flow System

Date: 2017-04-26 11:54:15

Project Information:

Operator Name T.Thomas  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 456959  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 48 ft

Pump placement from TOC 37.95 ft

Well Information:

Well ID WGWC-14A  
Well diameter 2 in  
Well Total Depth 42.95 ft  
Screen Length 10 ft  
Depth to Water 14.69 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.3042443 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 12 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:31:37	901.02	18.08	6.06	144.54	0.72	15.62	0.56	2.80
Last 5	11:36:37	1201.02	18.08	6.06	157.16	0.99	15.66	0.71	-0.29
Last 5	11:41:37	1501.02	18.03	6.07	162.88	0.50	15.68	0.57	-5.05
Last 5	11:46:36	1800.93	18.14	6.09	165.67	0.53	15.69	0.48	-10.01
Last 5	11:51:36	2100.93	18.03	6.09	167.21	0.43	15.69	0.40	-13.88
Variance 0			-0.05	0.01	5.71			-0.14	-4.76
Variance 1			0.11	0.01	2.79			-0.09	-4.96
Variance 2			-0.11	-0.00	1.54			-0.07	-3.87

Notes

Purge started at 1116. Purge rate at 200 ml/min. Weather - sunny 71F.  
Parameters stable at 1151. Well sampled at 1200. Sample rate at 200 ml/min.

Grab Samples

WGWC-14A  
Sampled at 1200

Product Name: Low-Flow System

Date: 2017-04-25 15:28:41

Project Information:

Operator Name M. Burch  
Company Name ERM  
Project Name GPC WANSLEY  
Site Name Default Site  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 365491  
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter 0.375 in  
Tubing Length 55 ft

Pump placement from TOC 51 ft

Well Information:

Well ID WGWC-15  
Well diameter 2 in  
Well Total Depth 56 ft  
Screen Length 10 ft  
Depth to Water 8.01 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.674525 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 146.1 in  
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	15:02:59	1199.71	18.96	7.28	271.75	0.65	18.20	0.69	-70.66
Last 5	15:07:59	1499.72	19.02	7.34	276.44	0.36	18.90	0.72	-69.62
Last 5	15:12:59	1799.71	19.05	7.40	284.31	0.19	19.50	0.65	-69.24
Last 5	15:17:59	2099.71	19.05	7.45	285.86	0.67	20.20	0.73	-69.96
Last 5	15:22:59	2399.71	19.19	7.47	285.22	0.60	20.20	0.67	-70.59
Variance 0			0.03	0.06	7.87			-0.07	0.38
Variance 1			0.00	0.05	1.54			0.08	-0.72
Variance 2			0.13	0.03	-0.64			-0.07	-0.63

Notes

Starting Purge at 1443 at 200mL/min  
Stopped Purging at 1523 @200mL/min

Grab Samples

WGWC-15  
Grabbed Sample at 1533 @200mL/min

Product Name: Low-Flow System

Date: 2017-04-25 14:18:30

Project Information:

Operator Name M. Burch  
Company Name ERM  
Project Name GPC WANSLEY  
Site Name Default Site  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 365491  
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter 0.375 in  
Tubing Length 34 ft

Pump placement from TOC 29 ft

Well Information:

Well ID WGWC-16  
Well diameter 2 in  
Well Total Depth 34.7 ft  
Screen Length 10 ft  
Depth to Water 6.64 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.218434 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 20.76 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	13:54:24	300.09	18.92	5.51	1959.15	0.21	8.35	0.19	38.25
Last 5	13:59:24	600.03	18.84	5.41	1973.20	0.10	8.36	0.14	33.67
Last 5	14:04:24	900.02	18.83	5.35	1979.03	0.05	8.37	0.15	30.10
Last 5	14:09:24	1200.03	18.82	5.30	1979.94	0.01	8.37	0.15	27.52
Last 5	14:14:24	1500.03	18.81	5.28	1985.70	0.12	8.37	0.15	25.24
Variance 0			-0.01	-0.06	5.82			0.02	-3.56
Variance 1			-0.01	-0.05	0.92			-0.00	-2.59
Variance 2			-0.01	-0.03	5.76			0.00	-2.28

Notes

Starting Purge at 1350 at 200mL/min  
Stopped Purging at 1415 at 200mL/min

Grab Samples

WGWC-16  
Grabbed Sample at 1420 @200mL/min

Product Name: Low-Flow System

Date: 2017-04-25 16:02:57

Project Information:

Operator Name T. Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 449474  
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.375 in  
Tubing Length 92 ft

Pump placement from TOC 91 ft

Well Information:

Well ID WGWC-17  
Well diameter 2 in  
Well Total Depth 96.16 ft  
Screen Length 10 ft  
Depth to Water 19.06 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 2.483115 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 9 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 100
Last 5	15:40:50	1200.03	21.08	6.25	170.00	0.59	19.79	1.76	-19.80
Last 5	15:45:50	1500.03	21.02	6.26	177.12	0.75	19.81	1.41	-15.56
Last 5	15:50:50	1800.03	21.04	6.27	180.28	0.62	19.81	1.17	-15.65
Last 5	15:55:51	2101.03	21.13	6.33	180.51	0.23	19.81	1.13	-18.48
Last 5	16:00:51	2401.03	21.24	6.36	179.00	0.31	19.81	1.06	-22.24
Variance 0			0.02	0.01	3.16			-0.23	-0.09
Variance 1			0.09	0.05	0.23			-0.04	-2.83
Variance 2			0.11	0.03	-1.51			-0.07	-3.75

Notes

Begin purging at 1520. Well stable at 1600. Sample at 1610. Sample rate 0.15L/min. Weather is sunny.

Grab Samples

WGWC-17  
1610

Product Name: Low-Flow System

Date: 2017-04-26 14:40:29

Project Information:

Operator Name T. Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 449474  
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter 0.375 in  
Tubing Length 91 ft

Pump placement from TOC 90 ft

Well Information:

Well ID WGWC-19  
Well diameter 2 in  
Well Total Depth 94.8 ft  
Screen Length 10 ft  
Depth to Water 21.18 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 2.461397 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 18.48 in  
Total Volume Pumped 6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 100
Last 5	14:17:50	300.10	19.40	7.00	138.01	1.82	22.27	1.02	-78.20
Last 5	14:22:50	600.03	18.72	6.93	131.90	0.85	22.52	0.87	-19.28
Last 5	14:27:50	900.03	18.47	6.86	131.21	1.21	22.64	0.39	-8.82
Last 5	14:32:50	1200.03	18.17	6.83	131.21	1.39	22.69	0.25	-4.05
Last 5	14:37:50	1500.03	18.55	6.82	132.00	1.86	22.72	0.21	-2.75
Variance 0			-0.26	-0.07	-0.69			-0.48	10.46
Variance 1			-0.30	-0.03	0.00			-0.14	4.77
Variance 2			0.38	-0.00	0.79			-0.04	1.30

Notes

Begin purging at 1412. Well stable at 1437. Sample at 1442. Sample rate 0.25L/min. DUP-2 taken. Weather is sunny.

Grab Samples

WGWC-19  
1442  
DUP-2  
1442





Product Name: Low-Flow System

Date: 2017-06-07 14:45:22

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name AP  
Site Name GPC - Plant Wansley  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 456959  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter .17 in  
Tubing Length 48 ft

Pump placement from TOC 38 ft

Well Information:

Well ID WGWC-14A  
Well diameter 2 in  
Well Total Depth 42.96 ft  
Screen Length 10 ft  
Depth to Water 13.59 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.3042443 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 11.88 in  
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10%
Last 5	14:19:33	600.03	19.86	6.22	133.58	0.75	14.49	0.23	24.81
Last 5	14:24:33	900.03	19.51	6.21	131.76	0.65	14.53	0.21	24.58
Last 5	14:29:33	1200.03	19.49	6.21	131.45	0.99	14.56	0.21	24.18
Last 5	14:34:33	1500.03	19.72	6.20	130.97	0.68	14.54	0.20	23.02
Last 5	14:39:33	1800.03	19.68	6.21	130.37	0.75	14.58	0.19	22.02
Variance 0			-0.02	-0.00	-0.31			-0.00	-0.41
Variance 1			0.24	-0.01	-0.49			-0.00	-1.15
Variance 2			-0.04	0.01	-0.59			-0.01	-1.01

Notes

Weather: 79F Mostly Cloudy. Purge Time: 1410/1440. DUP-1 collected.

Grab Samples

WGEC-14A  
Sample Time 1445  
DUP-1  
QA/QC

Product Name: Low-Flow System

Date: 2017-06-07 16:25:47

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name AP  
Site Name GPC - Plant Wansley  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 456959  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated QED Bladder  
Tubing Type Teflon  
Tubing Diameter .25 in  
Tubing Length 100 ft

Pump placement from TOC 90 ft

Well Information:

Well ID WGWC-19  
Well diameter 2 in  
Well Total Depth 94.8 ft  
Screen Length 10 ft  
Depth to Water 20.65 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 1.180273 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 11.16 in  
Total Volume Pumped 3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10%
Last 5	16:04:43	300.00	20.13	6.81	133.79	1.68	21.70	1.33	14.07
Last 5	16:09:43	599.94	19.07	6.77	130.85	2.93	21.85	0.36	13.58
Last 5	16:14:43	899.93	19.93	6.75	130.31	2.02	21.85	0.21	11.98
Last 5	16:19:43	1199.93	20.75	6.76	130.14	1.51	21.58	0.17	10.89
Last 5									
Variance 0			-1.06	-0.04	-2.94			-0.97	-0.49
Variance 1			0.86	-0.02	-0.54			-0.15	-1.61
Variance 2			0.82	0.00	-0.16			-0.04	-1.09

Notes

Weather 80F Partly Cloudy. Purge Time 1700/1620.

Grab Samples

WGWC-19  
Sample Time 1625

Product Name: Low-Flow System

Date: 2017-07-11 12:32:58

Project Information:

Operator Name A. Ellis  
Company Name ERM  
Project Name GPC Plant Wansley CCR  
Site Name Plant Wansley - AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 501336  
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 42.97 ft

Pump placement from TOC 37.97 ft

Well Information:

Well ID WGWC-14A  
Well diameter 2 in  
Well Total Depth 42.97 ft  
Screen Length 10 ft  
Depth to Water 14.00 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.5317933 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 9.12 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:08:31	2402.65	20.88	5.98	138.44	11.60	14.76	0.22	42.91
Last 5	12:13:31	2702.65	20.57	5.99	137.12	6.31	14.76	0.22	42.22
Last 5	12:18:31	3002.65	20.23	5.99	139.07	4.32	14.76	0.19	40.35
Last 5	12:23:31	3302.65	20.12	5.99	139.27	4.33	14.76	0.19	39.38
Last 5	12:28:31	3602.65	20.23	6.00	142.34	4.74	14.76	0.18	38.12
Variance 0			-0.34	0.01	1.95			-0.03	-1.86
Variance 1			-0.11	-0.00	0.20			-0.00	-0.97
Variance 2			0.11	0.01	3.07			-0.01	-1.27

Notes

Sampled at 1228; DUP-1

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-11 12:03:49

Project Information:

Operator Name W.Virgo  
Company Name ERM  
Project Name GPC Plant Wansley CCR  
Site Name Plant Wansley - AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 465016  
Turbidity Make/Model LaMotte 2020

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 95 ft

Pump placement from TOC 90 ft

Well Information:

Well ID WGWC-19  
Well diameter 2 in  
Well Total Depth 94.8 ft  
Screen Length 10 ft  
Depth to Water 19.72 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.7640252 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 16.8 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:40:45	300.11	24.96	6.93	131.92	2.22	20.50	1.30	27.77
Last 5	11:45:45	600.03	21.98	6.99	136.66	1.70	20.94	0.41	14.92
Last 5	11:50:45	900.03	21.74	7.00	137.76	0.89	21.06	0.42	9.17
Last 5	11:55:45	1200.03	22.39	6.98	138.77	0.75	21.11	0.41	6.02
Last 5	12:00:45	1500.03	22.17	6.99	140.53	0.80	21.12	0.38	4.22
Variance 0			-0.25	0.01	1.10			0.01	-5.75
Variance 1			0.66	-0.02	1.01			-0.01	-3.15
Variance 2			-0.22	0.01	1.76			-0.03	-1.80

Notes

Weather: sunny ~85F. Started purging at 11:36. Purge Rate: 200ml/min.  
Well parameters stable at 12:01. Sampled at 12:05. Sample Rate: 200ml/min.. 2nd Radium collected.

Grab Samples

WGWC-19  
Sample Time:12:05

Product Name: Low-Flow System

Date: 2017-08-08 10:37:35

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 497259  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type Teflon  
Tubing Diameter 0.375 in  
Tubing Length 135 ft

Pump placement from TOC 124.6 ft

Well Information:

Well ID WGWA-1  
Well diameter 2 in  
Well Total Depth 129.6 ft  
Screen Length 10 ft  
Depth to Water 25.69 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 3.172017 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.12 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 10%		+/- 10%	+/- 10%
Last 5	10:10:44	1199.94	19.94	5.36	35.94	0.22	25.70	3.27	92.20
Last 5	10:15:44	1499.93	19.89	5.35	36.06	0.38	25.70	3.12	95.24
Last 5	10:20:44	1799.92	19.95	5.31	36.03	0.17	25.70	2.94	99.46
Last 5	10:25:44	2099.93	19.89	5.30	36.12	0.14	25.70	2.82	100.03
Last 5	10:30:44	2399.92	20.00	5.32	36.10	0.21	25.70	2.71	99.49
Variance 0			0.06	-0.04	-0.04			-0.18	4.22
Variance 1			-0.06	-0.01	0.10			-0.12	0.57
Variance 2			0.11	0.02	-0.03			-0.11	-0.55

Notes

Weather: 71F Rain. Purge Time: 0950/1030. Purged 8L at 200mL/min.

Grab Samples

WGWA-1  
Sample Time 1031

Product Name: Low-Flow System

Date: 2017-08-08 09:02:11

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 497259  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type Teflon  
Tubing Diameter 0.375 in  
Tubing Length 105 ft

Pump placement from TOC 99 ft

Well Information:

Well ID WGWA-2  
Well diameter 2 in  
Well Total Depth 104.9 ft  
Screen Length 10 ft  
Depth to Water 10.23 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 2.520458 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 8.88 in  
Total Volume Pumped 6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 10%		+/- 10%	+/- 10%
Last 5	08:36:10	300.10	20.62	6.37	151.78	0.65	10.67	0.20	46.57
Last 5	08:41:10	600.03	18.03	6.26	173.01	1.62	10.94	0.16	43.51
Last 5	08:46:10	900.03	17.92	6.23	160.06	0.95	11.03	0.09	40.47
Last 5	08:51:10	1200.03	18.02	6.23	157.46	0.41	10.97	0.07	41.39
Last 5	08:56:10	1500.03	18.01	6.23	157.42	0.35	10.97	0.06	41.93
Variance 0			-0.11	-0.03	-12.96			-0.08	-3.03
Variance 1			0.11	-0.00	-2.60			-0.02	0.92
Variance 2			-0.01	-0.01	-0.03			-0.00	0.53

Notes

Weather: 71F Rain. Purge Time: 0831/0856. Purged 6.25L at 250mL/min. DUP-1 collected.

Grab Samples

WGWA-2  
Sample Time 0857  
DUP-1  
QA/QC

Product Name: Low-Flow System

Date: 2017-08-08 15:22:32

Project Information:

Operator Name Taylor Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 497259  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter .17 in  
Tubing Length 17 ft

Pump placement from TOC 14 ft

Well Information:

Well ID WGWA-3  
Well diameter 2 in  
Well Total Depth 19 ft  
Screen Length 10 ft  
Depth to Water 2.9 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.3458782 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.6 in  
Total Volume Pumped 7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 100%
Last 5	14:58:30	600.03	17.65	5.68	37.27	2.30	2.95	5.22	59.81
Last 5	15:03:30	900.03	17.63	5.61	37.23	0.81	2.95	5.23	65.25
Last 5	15:08:30	1200.03	17.62	5.58	37.15	2.53	2.95	5.22	70.79
Last 5	15:13:31	1501.03	17.60	5.50	37.18	1.71	2.95	5.22	73.65
Last 5	15:18:31	1801.07	17.58	5.52	37.19	1.75	2.95	5.23	73.70
Variance 0			-0.01	-0.04	-0.08			-0.01	5.55
Variance 1			-0.02	-0.08	0.04			-0.00	2.86
Variance 2			-0.03	0.02	0.01			0.01	0.05

Notes  
Begin purging at 1448. Stable at 1518. Sample at 1520. Sample rate 0.25l/min. Weather is cloudy with light rain.

Grab Samples  
WGWA-3  
1520



Product Name: Low-Flow System

Date: 2017-08-09 11:23:38

Project Information:

Operator Name Taylor Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 497259  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter .17 in  
Tubing Length 71 ft

Pump placement from TOC 68 ft

Well Information:

Well ID WGWA-4  
Well diameter 2 in  
Well Total Depth 73.1 ft  
Screen Length 10 ft  
Depth to Water 5.15 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.5869031 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 15 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10%
Last 5	11:06:27	300.15	17.98	6.52	136.69	0.91	6.40	0.03	37.47
Last 5	11:11:27	600.03	18.60	6.59	135.20	0.89	6.40	0.05	25.65
Last 5	11:16:27	900.02	18.80	6.63	133.44	0.57	6.40	0.06	19.69
Last 5	11:21:27	1200.03	18.75	6.67	133.00	0.53	6.40	0.07	14.15
Last 5									
Variance 0			0.62	0.07	-1.49			0.02	-11.82
Variance 1			0.20	0.04	-1.77			0.01	-5.96
Variance 2			-0.04	0.04	-0.44			0.01	-5.55

Notes

Begin purging at 1101. Well stable at 1121. Sample at 1125. Sample rate 0.25L/min. Weather is cloudy. FERB-1 taken at 1130.

Grab Samples

WGWA-4  
1125  
FERB-1  
1130

Product Name: Low-Flow System

Date: 2017-08-09 10:16:56

Project Information:

Operator Name Taylor Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 497259  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter .17 in  
Tubing Length 26 ft

Pump placement from TOC 18 ft

Well Information:

Well ID WGWA-5  
Well diameter 2 in  
Well Total Depth 23.19 ft  
Screen Length 10 ft  
Depth to Water 13.58 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.206049 L  
Calculated Sample Rate 240 sec  
Stabilization Drawdown 7.2 in  
Total Volume Pumped 20 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 100%
Last 5	09:57:00	1680.02	18.96	5.24	26.49	--	--	3.58	117.43
Last 5	10:01:00	1920.03	19.00	5.22	26.43	--	--	3.59	117.22
Last 5	10:05:00	2160.03	19.05	5.21	26.41	4.12	14.35	3.61	115.68
Last 5	10:09:00	2400.02	19.35	5.25	26.31	4.07	14.22	3.61	113.97
Last 5	10:13:00	2640.02	19.44	5.25	26.18	4.11	14.18	3.60	113.36
Variance 0			0.04	-0.00	-0.03			0.02	-1.54
Variance 1			0.30	0.04	-0.10			0.00	-1.71
Variance 2			0.09	0.00	-0.13			-0.01	-0.61

Notes

Begin purging 3 well volumes at 0928 since depth to water was below top of screen. Purge well volumes at 0.5L/min. Lower purge rate to 0.25L/min after 3rd well volume at 1004. Well stable at 1014. Sample at 1015. Extra radium bottle taken. Sample rate 0.25L/min. Weather is cloudy.

Grab Samples

WGWA-5  
1015. Extra Radium

Product Name: Low-Flow System

Date: 2017-08-08 14:32:47

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 497259  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type Teflon  
Tubing Diameter 0.375 in  
Tubing Length 109.5 ft

Pump placement from TOC 99.5 ft

Well Information:

Well ID WGWA-6  
Well diameter 2 in  
Well Total Depth 104.5 ft  
Screen Length 10 ft  
Depth to Water 14.16 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 2.618191 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 9.6 in  
Total Volume Pumped 4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 10%		+/- 10%	+/- 10%
Last 5	14:05:39	300.09	20.30	7.30	168.01	0.44	14.54	0.18	9.91
Last 5	14:10:39	600.03	18.21	7.58	176.64	0.20	14.76	0.21	4.04
Last 5	14:15:39	900.03	18.24	7.67	177.42	0.60	14.91	0.15	-0.37
Last 5	14:20:39	1200.03	18.51	7.72	177.86	0.26	14.95	0.14	-6.16
Last 5	14:25:39	1500.03	18.75	7.74	177.96	0.14	14.96	0.12	-11.03
Variance 0			0.04	0.09	0.77			-0.05	-4.41
Variance 1			0.27	0.04	0.44			-0.02	-5.79
Variance 2			0.24	0.02	0.10			-0.02	-4.87

Notes

Weather: 78F rain. Purge Time: 1400/1425. Purged 3 L at 200mL/min. Reduced flow rate to reduce drawdown. Purged 1.5L at 150mL/min and sampled at same rate.

Grab Samples

WGWA-6  
Sample Time 1426

Product Name: Low-Flow System

Date: 2017-08-08 13:25:38

Project Information:

Operator Name Taylor Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 463453  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter .17 in  
Tubing Length 43 ft

Pump placement from TOC 34.5 ft

Well Information:

Well ID WGWA-7  
Well diameter 2 in  
Well Total Depth 39.6 ft  
Screen Length 10 ft  
Depth to Water 24.53 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.2819272 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.6 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10%
Last 5	13:02:03	1500.03	18.72	5.85	28.07	0.84	24.58	4.76	148.22
Last 5	13:07:03	1800.03	18.69	5.70	25.90	0.60	24.58	5.58	163.50
Last 5	13:12:03	2100.03	18.79	5.64	25.46	0.71	24.58	6.09	171.02
Last 5	13:17:04	2401.03	18.77	5.62	24.41	2.27	24.58	6.45	177.69
Last 5	13:22:04	2701.03	18.78	5.60	24.38	1.75	24.58	6.61	180.08
Variance 0			0.10	-0.06	-0.44			0.51	7.52
Variance 1			-0.02	-0.03	-1.05			0.36	6.67
Variance 2			0.01	-0.01	-0.04			0.15	2.39

Notes

Begin purging at 1237. Initial purge rate 0.1L/min. Increase purge rate to 0.2L/min at 1247. Well stable at 1322. Sample at 1325. Sample rate 0.2L/min. Weather is cloudy with light rain.

Grab Samples

WGWA-7  
1325

Product Name: Low-Flow System

Date: 2017-08-08 13:32:17

Project Information:

Operator Name C. Hurdle  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 497259  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type Teflon  
Tubing Diameter 0.375 in  
Tubing Length 45 ft

Pump placement from TOC 35 ft

Well Information:

Well ID WGWC-18  
Well diameter 2 in  
Well Total Depth 40 ft  
Screen Length 10 ft  
Depth to Water 18.78 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 1.217339 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 24.24 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 10%		+/- 10%	+/- 10%
Last 5	12:45:44	1800.03	18.60	6.89	198.61	1.17	20.98	1.12	45.41
Last 5	12:50:44	2100.03	18.60	6.85	195.70	1.09	20.92	0.98	43.73
Last 5	12:55:44	2400.03	18.60	6.79	192.69	0.76	20.87	0.87	41.78
Last 5	13:00:44	2700.03	18.62	6.75	189.58	0.94	20.84	0.82	39.20
Last 5	13:05:44	3000.03	18.60	6.72	186.33	0.72	20.80	0.86	36.96
Variance 0			-0.00	-0.06	-3.01			-0.11	-1.95
Variance 1			0.02	-0.04	-3.11			-0.05	-2.58
Variance 2			-0.02	-0.03	-3.25			0.04	-2.24

Notes

Weather: 73F Rain. Purge Time: 1215/1305. Purged 3L at 150mL/min then reduced flow rate to reduce drawdown. Purged 3L at 100mL/min then sampled at same rate. Field Blank collected while purging.

Grab Samples

WGWA-18  
Sample Time:1306  
FB-1  
Sample Time 1251

Product Name: Low-Flow System

Date: 2017-08-10 12:38:17

Project Information:

Operator Name A. Ellis  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364452  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type Teflon  
Tubing Diameter 0.375 in  
Tubing Length 55 ft

Pump placement from TOC 54.5 ft

Well Information:

Well ID WHWC-8  
Well diameter 2 in  
Well Total Depth 59.4 ft  
Screen Length 10 ft  
Depth to Water 4.31 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 1.434525 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 29.64 in  
Total Volume Pumped 3.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 10%		+/- 10%	+/- 10%
Last 5	12:17:02	300.10	20.07	5.60	524.83	1.45	6.60	0.76	71.66
Last 5	12:22:02	600.03	20.70	5.72	523.52	1.34	6.65	0.66	72.34
Last 5	12:27:02	900.03	20.61	5.65	546.42	1.32	6.70	0.82	72.27
Last 5	12:32:02	1200.03	20.48	5.61	555.37	1.28	6.75	0.93	72.42
Last 5	12:37:02	1500.03	20.53	5.59	563.32	1.86	6.78	0.99	73.02
Variance 0			-0.09	-0.07	22.90			0.16	-0.07
Variance 1			-0.13	-0.05	8.95			0.10	0.15
Variance 2			0.04	-0.01	7.95			0.06	0.59

Notes

Weather 80 overcast; sampled @ 1237

Grab Samples

WGWC-8  
1237

Product Name: Low-Flow System

Date: 2017-08-10 10:09:19

Project Information:

Operator Name A. Ellis  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name Gypsum LF  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364452  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 56 ft

Pump placement from TOC 56 ft

Well Information:

Well ID WGWC-9  
Well diameter 2 in  
Well Total Depth 61.42 ft  
Screen Length 10 ft  
Depth to Water 14.5 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.3399517 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 37.32 in  
Total Volume Pumped 4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 10%		+/- 10%	+/- 10%
Last 5	09:45:16	1500.03	22.35	5.87	140.93	7.76	17.40	1.27	36.37
Last 5	09:50:15	1799.47	22.46	5.89	141.02	6.54	17.50	1.26	33.35
Last 5	09:55:15	2099.47	22.55	5.89	140.12	3.45	17.55	1.27	30.97
Last 5	10:00:15	2399.47	22.34	5.85	138.95	1.23	17.57	1.28	32.19
Last 5	10:05:15	2699.47	22.34	5.86	139.79	0.74	17.61	1.28	30.91
Variance 0			0.09	0.00	-0.90			0.01	-2.38
Variance 1			-0.21	-0.04	-1.17			0.01	1.22
Variance 2			0.00	0.01	0.84			-0.00	-1.29

Notes

Weather 80 overcast; sample at 1007; FERB-2 at 1015

Grab Samples

WGWC-9  
1007

FERB-2  
1015

Product Name: Low-Flow System

Date: 2017-08-10 14:13:29

Project Information:

Operator Name Taylor Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 497259  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter .17 in  
Tubing Length 148 ft

Pump placement from TOC 140 ft

Well Information:

Well ID WGWC-10  
Well diameter 2 in  
Well Total Depth 147.16 ft  
Screen Length 10 ft  
Depth to Water 18.45 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.7505867 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 39.72 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10%
Last 5	13:48:30	900.03	20.03	6.67	84.18	1.34	21.01	2.36	67.43
Last 5	13:53:30	1200.03	20.07	6.66	84.27	0.84	21.38	2.36	67.29
Last 5	13:58:30	1500.03	20.26	6.66	84.53	0.82	21.56	2.36	67.26
Last 5	14:03:30	1800.03	20.16	6.66	83.62	0.81	21.74	2.34	68.20
Last 5	14:08:30	2100.03	20.03	6.66	84.12	0.75	21.81	2.39	68.06
Variance 0			0.19	0.00	0.26			0.00	-0.03
Variance 1			-0.10	-0.00	-0.91			-0.02	0.95
Variance 2			-0.13	0.00	0.49			0.05	-0.15

Notes

Began purging at 1333. Alexis Peristaltic pump used. Well has a dedicated Bladder pump installed but would not purge faster than 25mL/min. Well stable at 1408. Sample at 1410. Sample rate 0.2L/min. Additional Radium sample taken. Weather is sunny.

Grab Samples

WGWC-10  
1410. Additional Radium sample



Product Name: Low-Flow System

Date: 2017-08-10 09:43:53

Project Information:

Operator Name Taylor Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 497259  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter .17 in  
Tubing Length 47.5 ft

Pump placement from TOC 44.5 ft

Well Information:

Well ID WGWC-11  
Well diameter 2 in  
Well Total Depth 49.5 ft  
Screen Length 10 ft  
Depth to Water 26.12 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.4820126 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 43.32 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10%
Last 5	09:22:16	900.03	17.58	6.11	57.92	12.73	29.48	4.98	90.78
Last 5	09:27:16	1200.03	17.58	6.08	57.76	8.98	29.71	5.01	89.90
Last 5	09:32:16	1500.03	17.66	6.07	57.76	4.64	29.73	5.08	89.23
Last 5	09:37:16	1800.03	17.81	6.08	57.81	4.13	29.73	5.12	87.93
Last 5	09:42:16	2100.03	17.80	6.05	57.82	3.69	39.73	5.15	88.79
Variance 0			0.09	-0.01	0.00			0.07	-0.66
Variance 1			0.15	0.01	0.05			0.04	-1.31
Variance 2			-0.01	-0.03	0.01			0.03	0.86

Notes

Begin purging at 0907. Well stable at 0942. Sample at 0945. Sample rate 0.2L/min. DUP-2 taken. Weather is cloudy.

Grab Samples

WGWC-11  
0945  
DUP-2  
0945

Product Name: Low-Flow System

Date: 2017-08-10 11:52:13

Project Information:

Operator Name Taylor Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 497259  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter .17 in  
Tubing Length 74.5 ft

Pump placement from TOC 71.5 ft

Well Information:

Well ID WGWC-12  
Well diameter 2 in  
Well Total Depth 76.5 ft  
Screen Length 10 ft  
Depth to Water 25.48 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.602525 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.24 in  
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10%
Last 5	11:29:01	4199.81	22.96	6.68	144.24	8.15	25.75	1.82	37.31
Last 5	11:34:01	4499.81	23.23	6.68	144.28	5.99	25.75	1.79	37.60
Last 5	11:39:01	4799.81	23.42	6.69	144.51	4.37	25.75	1.76	37.39
Last 5	11:44:01	5099.81	23.60	6.69	144.36	3.50	25.75	1.73	37.88
Last 5	11:49:01	5399.84	23.74	6.70	144.25	--	--	1.69	37.48
Variance 0			0.19	0.00	0.23			-0.03	-0.21
Variance 1			0.18	0.00	-0.16			-0.03	0.49
Variance 2			0.14	0.00	-0.10			-0.04	-0.40

Notes

Begin purging at 1019. Well stable at 1149. Sample at 1150. Final turbidity at 1149 was 2.49 NTU. Sample rate 0.1L/min. Weather is cloudy.

Grab Samples

WGWC-12  
1150

Product Name: Low-Flow System

Date: 2017-08-09 14:19:19

Project Information:

Operator Name Taylor Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 497259  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter .17 in  
Tubing Length 94 ft

Pump placement from TOC 91 ft

Well Information:

Well ID WGWC-13  
Well diameter 2 in  
Well Total Depth 96.31 ft  
Screen Length 10 ft  
Depth to Water 13.59 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.6895618 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 52.32 in  
Total Volume Pumped 5.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10%
Last 5	13:52:19	600.03	18.21	6.58	113.01	2.53	16.50	0.23	30.26
Last 5	13:57:19	900.03	18.76	6.55	114.27	4.43	17.15	0.24	30.91
Last 5	14:02:19	1200.03	18.20	6.56	112.32	1.66	17.91	0.19	32.78
Last 5	14:07:19	1499.92	18.79	6.55	112.55	1.86	17.95	0.21	32.64
Last 5	14:12:19	1799.92	18.87	6.55	112.15	0.54	17.95	0.20	32.95
Variance 0			-0.56	0.00	-1.95			-0.05	1.87
Variance 1			0.59	-0.00	0.23			0.02	-0.14
Variance 2			0.08	-0.00	-0.40			-0.00	0.31

Notes

Begin purging at 1342. Initial purge rate 0.2L/min. Lower purge rate to 0.2L/min at 1352 due to excessive drawdown. Lower purge rate to 0.1L/min at 1402 due to excessive drawdown. Well stable at 1412. Sample at 1515. Weather is cloudy with light rain.

Grab Samples

WGWC-13  
1515

Product Name: Low-Flow System

Date: 2017-08-09 14:22:27

Project Information:

Operator Name A. Ellis  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364452  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type Teflon  
Tubing Diameter 0.375 in  
Tubing Length 51 ft

Pump placement from TOC 51 ft

Well Information:

Well ID WGWC-15  
Well diameter 2 in  
Well Total Depth 56 ft  
Screen Length 10 ft  
Depth to Water 7.71 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 1.347651 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 100.68 in  
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 10%		+/- 10%	+/- 10%
Last 5	14:04:01	300.03	20.21	7.45	311.42	1.12	11.90	0.10	-25.78
Last 5	14:09:01	600.02	20.08	7.43	274.64	1.07	13.95	0.06	-53.65
Last 5	14:14:01	900.03	20.31	7.39	265.86	0.96	15.50	0.06	-61.54
Last 5	14:19:01	1200.03	20.30	7.37	266.03	0.95	16.10	0.07	-62.35
Last 5									
Variance 0			-0.13	-0.02	-36.77			-0.04	-27.86
Variance 1			0.23	-0.04	-8.78			-0.00	-7.89
Variance 2			-0.00	-0.01	0.17			0.01	-0.81

Notes

Weather 80 and raining; purge Time 1359-1419; sampled at 1419; FB-2 @ 1423

Grab Samples

WGWC-15  
1419

FB-2  
1423

Product Name: Low-Flow System

Date: 2017-08-09 11:55:37

Project Information:

Operator Name A. Ellis  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364452  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type Teflon  
Tubing Diameter 0.375 in  
Tubing Length 29 ft

Pump placement from TOC 29 ft

Well Information:

Well ID WGWC-16  
Well diameter 2 in  
Well Total Depth 34.7 ft  
Screen Length 10 ft  
Depth to Water 7.25 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.8698407 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 1.8 in  
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
			+/- 2	+/- 0.1	+/- 5%	+/- 10%		+/- 10%	+/- 10%
Stabilization									
Last 5	11:33:03	1500.00	19.59	5.70	1801.31	0.97	7.40	0.08	41.17
Last 5	11:38:03	1799.99	19.59	5.62	1945.69	0.96	7.40	0.08	42.25
Last 5	11:43:02	2099.95	19.59	5.55	2051.83	0.96	7.40	0.08	43.02
Last 5	11:48:02	2399.97	19.59	5.50	2106.28	0.92	7.40	0.08	43.30
Last 5	11:53:02	2699.97	19.61	5.46	2154.09	0.91	7.40	0.08	43.58
Variance 0			-0.00	-0.06	106.14			-0.00	0.77
Variance 1			0.00	-0.06	54.45			0.00	0.27
Variance 2			0.01	-0.04	47.81			-0.00	0.28

Notes

Weather -85 and overcast; Purge Time from 1108-1153; sample Time at 1153

Grab Samples

WGWC-16  
Sample

Product Name: Low-Flow System

Date: 2017-08-09 13:14:23

Project Information:

Operator Name Taylor Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 497259  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Bladder  
Tubing Type LDPE  
Tubing Diameter .17 in  
Tubing Length 94 ft

Pump placement from TOC 91 ft

Well Information:

Well ID WGWC-17  
Well diameter 2 in  
Well Total Depth 96.16 ft  
Screen Length 10 ft  
Depth to Water 18.89 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.6895618 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 37.44 in  
Total Volume Pumped 12.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:50:23	1799.88	18.09	6.52	143.06	0.71	22.01	1.08	4.06
Last 5	12:55:24	2100.88	18.07	6.49	138.14	0.78	22.01	1.38	5.85
Last 5	13:00:24	2400.88	18.04	6.48	134.30	0.88	22.01	1.59	7.57
Last 5	13:05:24	2700.88	18.69	6.46	132.52	0.70	22.01	1.71	8.66
Last 5	13:10:24	3000.88	18.72	6.47	136.59	0.81	22.01	1.66	10.65
Variance 0			-0.03	-0.02	-3.83			0.21	1.72
Variance 1			0.65	-0.02	-1.78			0.12	1.09
Variance 2			0.03	0.01	4.07			-0.05	1.99

Notes

Begin purging at 1220. Well stable at 1310. Sample at 1315. Sample rate 0.25L/min. Weather is cloudy with light rain.

Grab Samples

WGWC-17  
1315

Product Name: Low-Flow System

Date: 2017-08-10 11:48:23

Project Information:

Operator Name A. Ellis  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364452  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type Teflon  
Tubing Diameter 0.375 in  
Tubing Length 84.8 ft

Pump placement from TOC 90 ft

Well Information:

Well ID WGWC-19  
Well diameter 2 in  
Well Total Depth 94.8 ft  
Screen Length 10 ft  
Depth to Water 20.45 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 2.081741 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.6 in  
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 10%		+/- 10%	+/- 10%
Last 5	11:31:41	300.10	18.26	6.63	124.68	8.65	20.75	0.27	29.83
Last 5	11:36:41	600.03	19.63	6.62	126.55	4.59	20.75	0.09	25.79
Last 5	11:41:41	900.03	20.05	6.61	125.74	4.43	20.75	0.06	25.96
Last 5	11:46:41	1199.88	19.97	6.59	126.06	4.45	20.75	0.08	26.69
Last 5									
Variance 0			1.38	-0.01	1.88			-0.18	-4.04
Variance 1			0.41	-0.01	-0.81			-0.03	0.17
Variance 2			-0.07	-0.02	0.31			0.01	0.73

Notes

Weather 80 overcast; sampled at 1147

Grab Samples

WGWC-19  
1147

Product Name: Low-Flow System

Date: 2017-08-25 13:43:22

Project Information:

Operator Name H. Beough  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 449471  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LPDE  
Tubing Diameter 0.17 in  
Tubing Length 28 ft

Pump placement from TOC 18 ft

Well Information:

Well ID WGWA-5  
Well diameter 2 in  
Well Total Depth 23.6 ft  
Screen Length 10 ft  
Depth to Water 14.04 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.2149758 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 3.24 in  
Total Volume Pumped 27 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 25
Last 5	12:24:08	3899.87	21.19	5.39	28.33	5.58	14.41	3.60	181.91
Last 5	12:29:08	4199.87	21.10	5.43	28.30	5.59	14.36	3.59	178.80
Last 5	12:34:08	4499.87	22.12	5.43	28.21	5.46	14.34	3.54	179.33
Last 5	12:39:08	4799.87	22.17	5.44	28.28	5.41	4.31	3.53	177.99
Last 5	12:44:08	5099.87	22.25	5.44	28.32	--	--	3.53	176.63
Variance 0			1.03	-0.01	-0.09			-0.05	0.54
Variance 1			0.04	0.01	0.06			-0.01	-1.35
Variance 2			0.08	0.00	0.04			0.00	-1.36

Notes

Weather: partly cloudy 82 degrees F. Purge rate: 400, then 500, then 200, then 100. Purge time: 1119 to 1244. 3X well volumes. Extra RAD bottle, DUP-1, FB-1, and FERB-1.

Grab Samples

WGWA-5  
Sample time: 1250  
DUP-1  
Sample time: 1250



FB-1  
Sample time: 1220

FERB-1  
Sample time: 1323

Product Name: Low-Flow System

Date: 2017-09-06 12:57:32

Project Information:

Operator Name Myles Rogers.  
Company Name ERM  
Project Name Plant Wansley CCR  
Site Name Plant Wansley  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 463072  
Turbidity Make/Model LaMotte

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter .17 in  
Tubing Length 26 ft

Pump placement from TOC 18 ft

Well Information:

Well ID WGWA-5  
Well diameter 2 in  
Well Total Depth 23.43 ft  
Screen Length 10 ft  
Depth to Water 14.55 ft

Pumping Information:

Final Pumping Rate 250 mL/min  
Total System Volume 0.326049 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 5.64 in  
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	12:35:02	1200.03	19.55	5.37	32.51	5.52	15.00	2.15	40.88
Last 5	12:40:02	1500.02	19.68	5.30	31.07	5.03	15.00	2.24	39.77
Last 5	12:45:02	1800.02	19.86	5.30	29.23	4.79	15.00	2.29	36.90
Last 5	12:50:02	2100.02	20.00	5.28	28.75	4.66	15.00	2.55	37.76
Last 5	12:55:02	2400.02	20.18	5.27	28.91	4.31	15.02	2.62	37.64
Variance 0			0.18	0.00	-1.84			0.06	-2.87
Variance 1			0.15	-0.02	-0.48			0.25	0.86
Variance 2			0.17	-0.02	0.16			0.07	-0.12

Notes

Will purge one well volume low flowing them sample when stable. Only filling two RAD bottles  
Parameters stable. Will fill two RAD BOTTLES.

Grab Samples

WGWA-5  
Sampling at 1300

Product Name: Low-Flow System

Date: 2017-10-10 10:13:38

Project Information:

Operator Name A. Ellis  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 365491  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type Teflon  
Tubing Diameter 0.375 in  
Tubing Length 130 ft

Pump placement from TOC 124 ft

Well Information:

Well ID WGWA-1  
Well diameter 2 in  
Well Total Depth 129.6 ft  
Screen Length 10 ft  
Depth to Water 26.61 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 3.309424 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:50:02	300.11	20.03	6.38	36.28	0.15	26.61	0.25	-15.32
Last 5	09:55:02	600.02	19.78	5.44	37.82	0.47	26.61	1.65	-18.23
Last 5	10:00:02	900.03	19.83	5.28	37.51	0.67	26.61	1.79	-23.41
Last 5	10:05:02	1200.35	19.87	5.24	37.53	0.55	26.61	1.82	-26.51
Last 5	10:10:02	1500.35	19.80	5.26	37.60	0.53	26.61	1.85	-30.96
Variance 0			0.05	-0.16	-0.30			0.13	-5.18
Variance 1			0.04	-0.04	0.01			0.03	-3.10
Variance 2			-0.07	0.02	0.08			0.03	-4.44

Notes

Purge time 0945/1010; stabilized @1010; WGWA-1 sampled @ 1010; FB-1 @ 0956

Grab Samples

WGWA-1  
1010

FB-1  
0956

Product Name: Low-Flow System

Date: 2017-10-10 10:48:00

Project Information:

Operator Name Myles Rogers  
Company Name ERM  
Project Name GPC-Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 513028  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter .375 in  
Tubing Length 104.9 ft

Pump placement from TOC 100 ft

Well Information:

Well ID WGWA-2  
Well diameter 2 in  
Well Total Depth 104.9 ft  
Screen Length 10 ft  
Depth to Water 10.75 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 2.764286 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 2.28 in  
Total Volume Pumped 13 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	10:25:25	2699.97	19.02	6.40	197.33	0.75	10.94	1.35	35.15
Last 5	10:30:25	2999.97	18.50	6.34	187.67	0.51	10.94	1.05	30.33
Last 5	10:35:25	3299.97	18.43	6.31	183.66	0.50	10.94	0.83	27.80
Last 5	10:40:25	3599.97	18.45	6.32	179.92	0.48	10.94	0.68	27.33
Last 5	10:45:25	3899.90	18.39	6.32	177.13	0.47	10.94	0.59	28.84
Variance 0			-0.07	-0.03	-4.01			-0.22	-2.54
Variance 1			0.02	0.00	-3.74			-0.16	-0.46
Variance 2			-0.07	-0.00	-2.78			-0.09	1.51

Notes

Parameters stable. Had specific conductance at 3% not 5%. Purged from 9:40-10:45. Sampling WGWA-2 at 10:50. Sampled FERB-1 at 10:30

Grab Samples

WGWA-2  
10:50

FERB-1  
10:30

Product Name: Low-Flow System

Date: 2017-10-11 09:44:03

Project Information:

Operator Name Myles Rogers  
Company Name ERM  
Project Name GPC-Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 513028  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type dedicated Bladder  
Tubing Type Teflon  
Tubing Diameter .375 in  
Tubing Length 19 ft

Pump placement from TOC 14 ft

Well Information:

Well ID WGWA-3  
Well diameter 2 in  
Well Total Depth 19 ft  
Screen Length 10 ft  
Depth to Water 3.38 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.8986543 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0 in  
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:27:36	300.09	19.84	5.69	36.85	0.30	3.38	5.55	116.42
Last 5	09:32:36	600.02	19.36	5.57	36.72	0.27	3.39	5.47	116.34
Last 5	09:37:36	900.02	19.31	5.55	36.60	0.17	3.38	5.43	115.13
Last 5	09:42:36	1200.03	19.32	5.51	36.56	0.10	3.38	5.40	115.68
Last 5									
Variance 0			-0.48	-0.13	-0.13			-0.08	-0.08
Variance 1			-0.05	-0.01	-0.11			-0.05	-1.21
Variance 2			0.01	-0.04	-0.04			-0.02	0.55

Notes

Purge Time: 9:22-9:42. Parameters stable. Sampling WGWA-3 at 9:45

Grab Samples

WGWA-3  
Sampling at 9:45

Product Name: Low-Flow System

Date: 2017-10-11 10:42:41

Project Information:

Operator Name Myles Rogers  
Company Name ERM  
Project Name GPC-Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 513028  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type dedicated Bladder  
Tubing Type Teflon  
Tubing Diameter .375 in  
Tubing Length 73.1 ft

Pump placement from TOC 68 ft

Well Information:

Well ID WGWA-4  
Well diameter 2 in  
Well Total Depth 73.1 ft  
Screen Length 10 ft  
Depth to Water 5.87 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 2.073633 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 4.8 in  
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:20:02	899.12	21.36	6.76	140.14	0.15	6.18	0.07	-13.45
Last 5	10:25:02	1199.12	21.30	6.78	139.72	0.06	6.20	0.07	-33.43
Last 5	10:30:02	1499.12	21.28	6.77	139.33	0.05	6.22	0.07	-45.55
Last 5	10:35:02	1799.12	21.33	6.76	138.87	0.08	6.25	0.07	-50.15
Last 5	10:40:02	2099.12	21.37	6.75	138.30	0.07	6.27	0.08	-50.73
Variance 0			-0.02	-0.01	-0.39			-0.00	-12.12
Variance 1			0.05	-0.01	-0.47			0.00	-4.60
Variance 2			0.04	-0.01	-0.56			0.00	-0.58

Notes

Purged 10:05-10:40. Parameters stable. WGWA-4 sampled at 10:45

Grab Samples

WGWA-4  
Sampling at 10:45

Product Name: Low-Flow System

Date: 2017-10-11 10:43:47

Project Information:

Operator Name W.Virgo  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364456  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 25 ft

Pump placement from TOC 18 ft

Well Information:

Well ID WGWA-5  
Well diameter 2 in  
Well Total Depth 23.19 ft  
Screen Length 10 ft  
Depth to Water 15.22 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.2015856 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 15.72 in  
Total Volume Pumped 17.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10%		+/- 0.2	+/- 25
Last 5	10:16:56	2699.97	20.55	6.98	27.49	5.46	16.46	3.77	94.47
Last 5	10:21:56	2999.97	20.62	6.98	27.58	4.56	16.53	3.72	97.04
Last 5	10:26:56	3299.97	22.71	6.98	28.41	4.42	15.98	4.02	98.52
Last 5	10:31:56	3599.97	23.20	6.99	28.60	4.31	15.78	4.04	101.36
Last 5	10:36:56	3899.97	23.27	6.99	28.22	4.11	15.67	4.06	103.06
Variance 0			2.08	0.00	0.84			0.30	1.48
Variance 1			0.49	0.00	0.19			0.02	2.84
Variance 2			0.07	0.00	-0.38			0.02	1.70

Notes

Started purging WGWA-5 at 09:31. Purge rate 100 ml/min.

Due to initial WL, 3 well volume method required. Initial purge rate 100 ml/min. Purge rate increased to 250 ml/min at 09:42, and to 500 ml/min at 10:02, because drawdown did not seem to be an issue. Purge rate decreased to 100 ml/min at 10:22 after 3 well volumes. WGWA-5 stable at 10:37.

Sampled at 10:40. Sample rate: 100 ml/min.

Grab Samples

WGWA-5

Sample Time: 10:40



Product Name: Low-Flow System

Date: 2017-10-11 11:32:14

Project Information:

Operator Name W.Virgo  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364456  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 105 ft

Pump placement from TOC 99 ft

Well Information:

Well ID WGWA-6  
Well diameter 2 in  
Well Total Depth 104.60 ft  
Screen Length 10 ft  
Depth to Water 15.64 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.9546594 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 7.44 in  
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 10%		+/- 0.2	+/- 25
Last 5	11:09:52	300.03	19.42	0.00	175.59	0.51	16.26	0.60	0.00
Last 5	11:14:52	600.02	19.01	6.97	176.58	0.31	16.26	0.25	90.39
Last 5	11:19:52	900.03	18.74	6.99	177.20	0.17	16.26	0.13	86.11
Last 5	11:24:52	1200.02	18.78	7.00	177.30	0.34	16.26	0.10	82.19
Last 5	11:29:52	1499.99	18.74	7.01	177.43	0.42	16.26	0.10	79.69
Variance 0			-0.27	0.01	0.62			-0.11	-4.28
Variance 1			0.04	0.01	0.11			-0.03	-3.92
Variance 2			-0.04	0.01	0.13			0.00	-2.50

Notes

Started purging WGWA-6 at 11:05. Purge rate: 200 ml/min.  
WGWA-6 parameters stable at 11:30. Well sampled at 11:35. Sample rate: 200 ml/min.

Grab Samples

WGWA-6  
Sample Time: 11:35

Product Name: Low-Flow System

Date: 2017-10-11 09:54:03

Project Information:

Operator Name T. Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 541714  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 43 ft

Pump placement from TOC 35 ft

Well Information:

Well ID WGWA-7  
Well diameter 2 in  
Well Total Depth 39.6 ft  
Screen Length 10 ft  
Depth to Water 26.43 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.2819272 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 0.6 in  
Total Volume Pumped 3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	09:30:58	300.17	20.28	5.54	24.41	1.33	26.48	7.23	116.92
Last 5	09:35:58	600.03	19.85	5.50	24.35	1.82	26.48	7.15	102.76
Last 5	09:40:58	900.03	19.62	5.45	23.58	1.70	26.48	7.08	93.57
Last 5	09:45:58	1200.03	19.21	5.43	22.86	1.83	26.48	7.28	88.23
Last 5	09:50:58	1500.03	19.16	5.43	22.55	1.78	26.48	7.52	85.51
Variance 0			-0.23	-0.05	-0.77			-0.06	-9.19
Variance 1			-0.40	-0.02	-0.72			0.20	-5.35
Variance 2			-0.05	-0.00	-0.31			0.24	-2.71

Notes

Begin purging at 0925. Initial purge rate 0.1L/min. Increase purge rate to 0.2L/min at 0940. Parameters stable at 0950. Stop purging at 0950.  
Sample WGWA-7 at 1000. FERB-2 taken at 1015.

Grab Samples

WGWA-7  
1000  
FERB-2  
1015

Product Name: Low-Flow System

Date: 2017-10-11 11:06:15

Project Information:

Operator Name T. Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 541714  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type Teflon  
Tubing Diameter 0.375 in  
Tubing Length 38 ft

Pump placement from TOC 35 ft

Well Information:

Well ID WGWA-18  
Well diameter 2 in  
Well Total Depth 40 ft  
Screen Length 10 ft  
Depth to Water 20.37 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 1.311309 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 19.68 in  
Total Volume Pumped 5.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	10:43:52	600.03	19.39	7.33	212.05	1.63	21.86	0.53	-16.79
Last 5	10:48:52	900.02	19.53	6.98	182.07	0.88	21.95	0.54	-0.74
Last 5	10:53:52	1200.00	19.48	6.84	165.19	1.56	22.01	0.72	9.15
Last 5	10:58:52	1500.01	19.52	6.78	160.27	1.43	22.01	0.65	12.25
Last 5	11:03:52	1800.01	19.56	6.75	157.91	1.55	22.01	0.58	12.96
Variance 0			-0.05	-0.13	-16.88			0.17	9.90
Variance 1			0.04	-0.06	-4.92			-0.07	3.10
Variance 2			0.04	-0.03	-2.37			-0.07	0.70

Notes

Began purging at 1033. Parameters stable at 1103. Stop purging at 1103. Sample WGWA-18 at 1110.

Grab Samples

WGWA-18  
1110

Product Name: Low-Flow System

Date: 2017-10-12 10:05:30

Project Information:

Operator Name Myles Rogers  
Company Name ERM  
Project Name GPC-Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 513028  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type dedicated Bladder  
Tubing Type Teflon  
Tubing Diameter .375 in  
Tubing Length 59.4 ft

Pump placement from TOC 54.5 ft

Well Information:

Well ID WGWC-8  
Well diameter 2 in  
Well Total Depth 59.4 ft  
Screen Length 10 ft  
Depth to Water 5.10 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 1.776088 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 17.04 in  
Total Volume Pumped 4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:43:12	600.03	21.12	5.80	599.48	0.36	5.78	1.20	128.96
Last 5	09:48:12	899.60	20.92	5.57	607.47	0.31	6.03	1.21	131.11
Last 5	09:53:12	1199.60	20.77	5.50	612.72	0.30	6.29	1.13	143.18
Last 5	09:58:12	1499.60	20.65	5.48	619.13	0.89	6.45	1.10	130.66
Last 5	10:03:12	1799.60	20.56	5.46	625.60	0.71	6.52	1.08	129.29
Variance 0			-0.16	-0.07	5.25			-0.08	12.07
Variance 1			-0.11	-0.02	6.41			-0.02	-12.52
Variance 2			-0.09	-0.02	6.48			-0.02	-1.36

Notes

Purged from 9:33-10:03. Parameters stable at 10:03. Sample WGWC-8 at 10:07

Grab Samples

WGWC-8  
Sampling at 10:07

Product Name: Low-Flow System

Date: 2017-10-12 11:47:25

Project Information:

Operator Name T. Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 541714  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 64 ft

Pump placement from TOC 56 ft

Well Information:

Well ID WGWC-9  
Well diameter 2 in  
Well Total Depth 61.42 ft  
Screen Length 10 ft  
Depth to Water 15.76 ft

Pumping Information:

Final Pumping Rate 100 mL/min  
Total System Volume 0.3756591 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 30.12 in  
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	11:25:39	1200.06	23.54	6.09	144.79	3.19	17.56	1.37	77.77
Last 5	11:30:39	1500.03	23.58	6.10	142.98	1.81	17.79	1.31	76.33
Last 5	11:35:39	1800.03	23.75	6.09	141.45	3.34	18.04	1.33	75.73
Last 5	11:40:39	2100.01	23.77	6.09	141.38	2.24	18.13	1.37	75.18
Last 5	11:45:39	2400.00	23.98	6.09	140.81	2.07	18.27	1.33	75.15
Variance 0			0.17	-0.02	-1.52			0.02	-0.60
Variance 1			0.01	-0.00	-0.07			0.04	-0.55
Variance 2			0.21	0.00	-0.57			-0.04	-0.03

Notes

Begin purging at 1105. Parameters stable at 1145. Stop purging at 1145. Sample WGWC-9 at 1150.

Grab Samples

WGWC-9  
1150

Product Name: Low-Flow System

Date: 2017-10-12 10:27:43

Project Information:

Operator Name T. Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 541714  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 148 ft

Pump placement from TOC 140 ft

Well Information:

Well ID WGWC-10  
Well diameter 2 in  
Well Total Depth 147.16 ft  
Screen Length 10 ft  
Depth to Water 19.73 ft

Pumping Information:

Final Pumping Rate 150 mL/min  
Total System Volume 0.7505867 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 36.24 in  
Total Volume Pumped 5.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	10:03:57	900.03	18.54	6.67	82.00	0.99	22.21	2.13	53.61
Last 5	10:08:57	1200.02	18.65	6.67	81.97	0.67	22.48	2.14	53.43
Last 5	10:13:57	1500.02	18.72	6.67	82.24	0.87	22.66	2.16	53.51
Last 5	10:18:57	1800.02	18.90	6.67	82.03	0.52	22.71	2.17	53.23
Last 5	10:23:57	2100.02	18.95	6.67	82.66	0.53	22.75	2.19	53.52
Variance 0			0.08	-0.00	0.27			0.02	0.08
Variance 1			0.17	0.00	-0.21			0.01	-0.28
Variance 2			0.05	0.00	0.63			0.01	0.29

Notes

WGWC-10 has a dedicated Bladder pump installed, but it is installed at such a depth that the Bladder pump controller cannot sustain sufficient pressure to pump water out of the well. A peristaltic pump was used instead. Began purging at 0948. Parameters stable at 1023. Stop purging at 1023. WGWC-10 sampled at 1030. FB-2 taken at 1020.

Grab Samples

FB-2

1020

WGWC-10

1030





Product Name: Low-Flow System

Date: 2017-10-12 10:56:22

Project Information:

Operator Name W.Virgo  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364456  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Defense Bladder  
Tubing Type LDPE  
Tubing Diameter 0.375 in  
Tubing Length 80 ft

Pump placement from TOC 72 ft

Well Information:

Well ID WGWC-12  
Well diameter 2 in  
Well Total Depth 76.50 ft  
Screen Length 10 ft  
Depth to Water 27.42 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 2.223492 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 24 in  
Total Volume Pumped 11 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10%		+/- 0.2	+/- 25
Last 5	10:33:14	600.02	16.91	6.89	142.52	13.10	29.36	0.09	82.50
Last 5	10:38:14	900.02	16.91	6.89	145.88	9.89	29.40	0.06	79.42
Last 5	10:43:14	1200.02	16.91	6.89	145.32	4.82	29.40	0.07	76.45
Last 5	10:48:14	1500.02	16.91	6.89	144.09	4.45	29.40	0.09	73.54
Last 5	10:53:14	1800.02	16.95	6.89	143.04	4.11	29.40	0.10	70.89
Variance 0			0.00	0.00	-0.57			0.01	-2.97
Variance 1			0.00	0.00	-1.22			0.01	-2.91
Variance 2			0.03	0.00	-1.06			0.01	-2.65

Notes

Started purging WGWC-12 at 10:23. Purge rate 200 ml/min.  
Purge rate increased to 400 ml/min at 10:28 to clear organic material creating high turbidity. WGWC-12 stable at 10:53 and sampled at 10:57.  
Sample rate: 200 ml/min.

Grab Samples  
WGWC-12  
Sample Time: 10:57

Product Name: Low-Flow System

Date: 2017-10-12 09:19:19

Project Information:

Operator Name W.Virgo  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364456  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Dedicated Bladder  
Tubing Type LDPE  
Tubing Diameter 0.375 in  
Tubing Length 96 ft

Pump placement from TOC 91 ft

Well Information:

Well ID WGWC-13  
Well diameter 2 in  
Well Total Depth 96.31 ft  
Screen Length 10 ft  
Depth to Water 15.50 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 2.57099 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 28.8 in  
Total Volume Pumped 4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 10%		+/- 0.2	+/- 25
Last 5	08:57:04	600.02	17.95	6.91	107.14	1.88	18.15	0.58	81.83
Last 5	09:02:04	900.02	17.93	6.80	106.67	1.80	19.07	0.48	83.31
Last 5	09:07:04	1200.01	18.56	6.74	107.10	1.67	18.47	0.57	84.19
Last 5	09:12:04	1500.01	19.14	6.70	107.05	2.40	18.18	0.60	84.79
Last 5	09:17:04	1800.01	19.50	6.67	107.05	1.49	17.90	0.59	87.27
Variance 0			0.63	-0.06	0.43			0.09	0.87
Variance 1			0.58	-0.04	-0.05			0.03	0.61
Variance 2			0.36	-0.03	0.00			-0.01	2.48

Notes

Started purging at 08:47. Purge rate: 200 ml/min.

Decreased purge rate to 100 ml/min at 09:02 to decrease drawdown. Well stable at 09:17. Sampled at 09:20 at 100 ml/min.

Grab Samples

WGWC-13

Sample Time: 09:29

Product Name: Low-Flow System

Date: 2017-10-11 13:14:10

Project Information:

Operator Name W.Virgo  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 364456  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic  
Tubing Type LDPE  
Tubing Diameter 0.17 in  
Tubing Length 45 ft

Pump placement from TOC 38 ft

Well Information:

Well ID WGWC-14A  
Well diameter 2 in  
Well Total Depth 42.95 ft  
Screen Length 10 ft  
Depth to Water 17.71 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 0.290854 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 25.68 in  
Total Volume Pumped 14 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 10%		+/- 0.2	+/- 25
Last 5	12:51:53	3000.03	20.14	6.97	93.29	1.35	19.56	0.67	71.73
Last 5	12:56:53	3299.97	20.32	6.97	92.64	1.21	19.57	0.35	70.86
Last 5	13:01:53	3599.97	20.59	6.97	93.10	1.09	19.57	0.50	70.03
Last 5	13:06:53	3899.97	20.39	6.97	92.53	1.66	19.58	0.65	69.90
Last 5	13:11:53	4199.97	20.21	6.97	93.97	1.30	19.58	0.52	69.18
Variance 0			0.26	0.00	0.46			0.14	-0.83
Variance 1			-0.20	0.00	-0.58			0.16	-0.14
Variance 2			-0.18	-0.00	1.44			-0.13	-0.71

Notes

Started purging WGWC-14A at 12:02. Purge rate: 200 ml/min.  
WGWC-14A parameters stable at 13:12. Well sampled at 13:15. Sample rate: 200 ml/min.

Grab Samples

WGWC-14A  
Sample Time: 13:15

Product Name: Low-Flow System

Date: 2017-10-11 13:04:44

Project Information:

Operator Name Myles Rogers  
Company Name ERM  
Project Name GPC-Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 513028  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type dedicated Bladder  
Tubing Type Teflon  
Tubing Diameter .375 in  
Tubing Length 56 ft

Pump placement from TOC 51 ft

Well Information:

Well ID WGWC-15  
Well diameter 2 in  
Well Total Depth 56 ft  
Screen Length 10 ft  
Depth to Water 9.69 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.702244 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 204.12 in  
Total Volume Pumped 15.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	12:42:36	3599.95	20.03	7.44	298.25	0.99	24.83	0.24	-78.90
Last 5	12:47:36	3899.93	20.03	7.42	293.86	0.83	25.55	0.22	-71.49
Last 5	12:52:36	4199.93	19.99	7.41	293.77	0.42	26.87	0.20	-65.84
Last 5	12:57:36	4499.93	20.21	7.41	298.86	1.30	26.82	0.21	-62.97
Last 5	13:02:36	4799.93	21.41	7.42	294.73	0.16	26.70	0.22	-61.35
Variance 0			-0.04	-0.01	-0.09			-0.01	5.65
Variance 1			0.22	0.01	5.09			0.01	2.87
Variance 2			1.20	0.00	-4.13			0.01	1.62

Notes

Purged from 11:42-13:02. Parameters stable at 12:12 lowered purge rate to 150ml/min so water level will stabilize at 12:47. WGWC-15 sample at

Grab Samples

WGWC-15  
Sampling at 13:05

Product Name: Low-Flow System

Date: 2017-10-11 10:17:16

Project Information:

Operator Name A. Ellis  
Company Name ERM  
Project Name GPC - Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 365491  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type Teflon  
Tubing Diameter 0.375 in  
Tubing Length 35 ft

Pump placement from TOC 29 ft

Well Information:

Well ID WGWC-16  
Well diameter 2 in  
Well Total Depth 34.7 ft  
Screen Length 10 ft  
Depth to Water 9.21 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 1.246153 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 1.2 in  
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	09:55:23	300.03	20.12	5.66	2144.41	0.98	9.31	0.18	-54.90
Last 5	10:00:23	599.94	20.07	5.60	2192.36	1.04	9.31	0.17	-57.07
Last 5	10:05:23	899.94	20.04	5.55	2217.87	0.74	9.31	0.16	-58.81
Last 5	10:10:23	1199.94	20.12	5.49	2239.58	0.70	9.31	0.16	-59.99
Last 5	10:15:23	1499.94	20.07	5.45	2261.82	0.69	9.31	0.16	-61.06
Variance 0			-0.03	-0.06	25.52			-0.01	-1.74
Variance 1			0.08	-0.05	21.71			0.00	-1.18
Variance 2			-0.05	-0.04	22.24			0.00	-1.07

Notes

Purge time 0935/1015; WGWC-16 & DUP-1@1016

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-11 12:48:44

Project Information:

Operator Name T. Payne  
Company Name ERM  
Project Name GPC - Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 541714  
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Dedicated Bladder  
Tubing Type Teflon  
Tubing Diameter 0.375 in  
Tubing Length 94 ft

Pump placement from TOC 91 ft

Well Information:

Well ID WGWC-17  
Well diameter 2 in  
Well Total Depth 96.16 ft  
Screen Length 10 ft  
Depth to Water 20.59 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 2.527553 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 26.88 in  
Total Volume Pumped 11 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	12:26:26	2100.03	19.48	6.49	142.90	0.85	22.83	0.78	12.71
Last 5	12:31:26	2400.03	19.57	6.49	140.49	0.98	22.83	0.89	12.61
Last 5	12:36:26	2700.03	19.25	6.48	139.07	0.55	22.83	1.06	12.82
Last 5	12:41:26	3000.03	19.43	6.46	136.27	0.63	22.83	1.15	13.23
Last 5	12:46:26	3300.03	19.58	6.47	133.66	0.49	22.83	1.25	12.93
Variance 0			-0.31	-0.01	-1.42			0.18	0.21
Variance 1			0.18	-0.02	-2.81			0.08	0.41
Variance 2			0.15	0.01	-2.61			0.11	-0.30

Notes

Begin purging well at 1151. Parameters stable at 1246. Stop purging at 1246. Sample WGWC-17 at 1250.

Grab Samples

WGWC-17  
1250

Product Name: Low-Flow System

Date: 2017-10-12 11:08:00

Project Information:

Operator Name Myles Rogers  
Company Name ERM  
Project Name GPC-Plant Wansley  
Site Name AP  
Latitude 0° 0' 0"  
Longitude 0° 0' 0"  
Sonde SN 513028  
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type dedicated Bladder  
Tubing Type Teflon  
Tubing Diameter .375 in  
Tubing Length 94.25 ft

Pump placement from TOC 90 ft

Well Information:

Well ID WGWC-19  
Well diameter 2 in  
Well Total Depth 94.80 ft  
Screen Length 10 ft  
Depth to Water 21.25 ft

Pumping Information:

Final Pumping Rate 200 mL/min  
Total System Volume 2.532982 L  
Calculated Sample Rate 300 sec  
Stabilization Drawdown 13.8 in  
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond $\mu$ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 10
Last 5	10:45:50	600.03	19.21	6.71	131.72	29.80	22.20	0.71	31.37
Last 5	10:50:50	900.03	18.89	6.67	131.23	13.27	22.31	0.23	37.81
Last 5	10:55:50	1200.02	18.75	6.67	131.72	4.28	22.42	0.18	38.07
Last 5	11:00:50	1500.02	18.79	6.69	131.88	2.72	22.40	0.14	40.54
Last 5	11:05:50	1800.02	18.79	6.70	132.08	2.03	22.40	0.13	42.62
Variance 0			-0.14	0.00	0.49			-0.05	0.26
Variance 1			0.04	0.01	0.16			-0.03	2.48
Variance 2			0.00	0.01	0.20			-0.01	2.07

Notes

Purged from 10:35-11:05. Parameters stable at 11:00. Sampling WGWC-19 and DUP-2 at 11:10

Grab Samples

WGWC-19

Sampling at 11:10

DUP-2

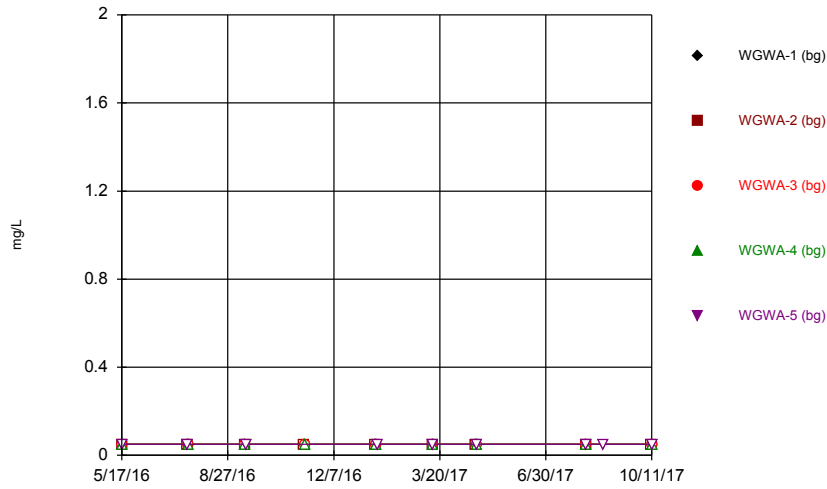
Sampled



## Appendix B

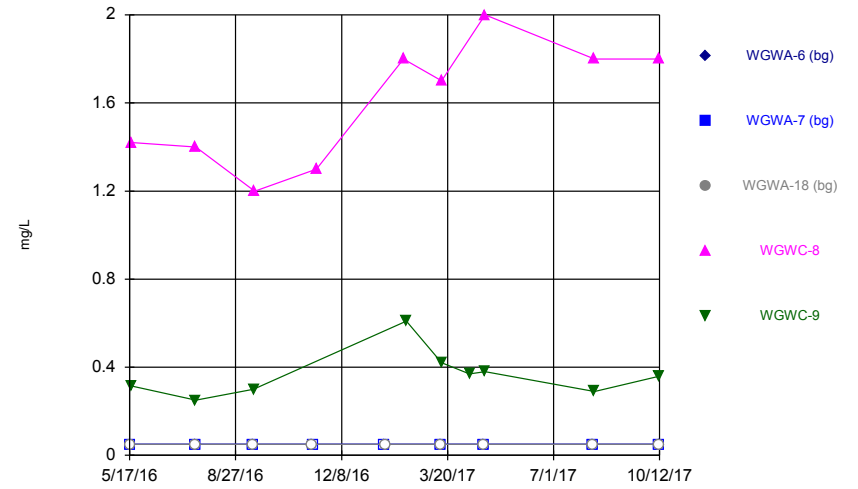
### Statistical Analyses

Time Series



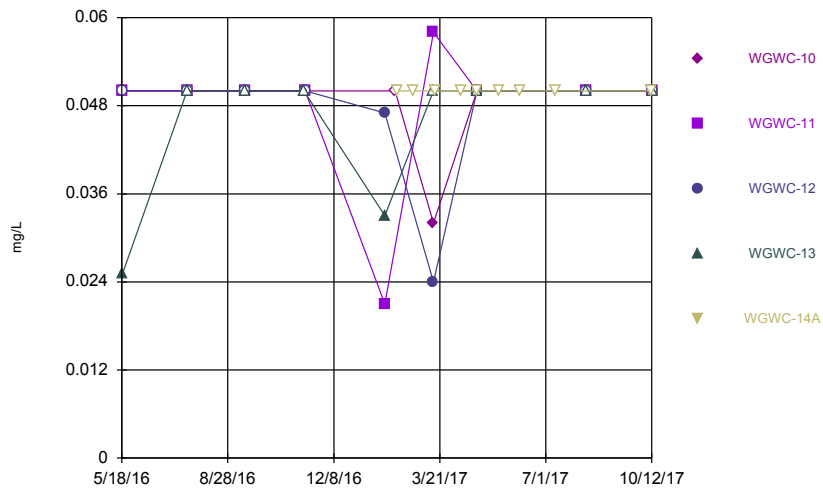
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Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



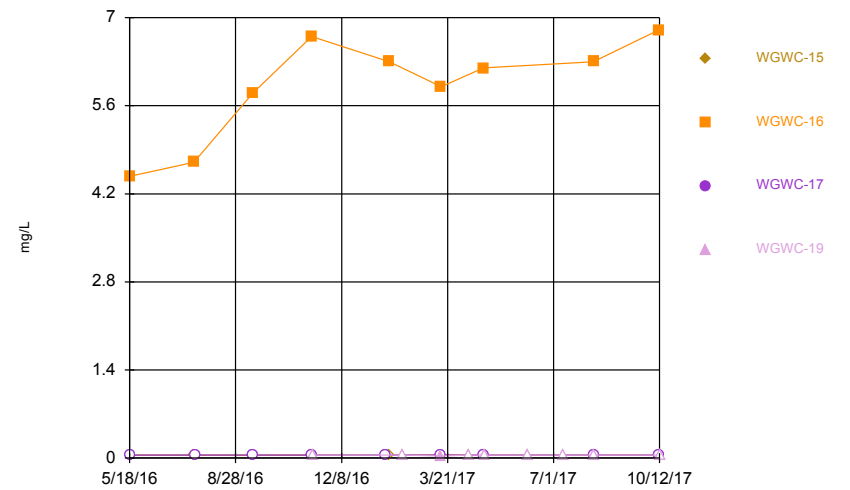
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Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



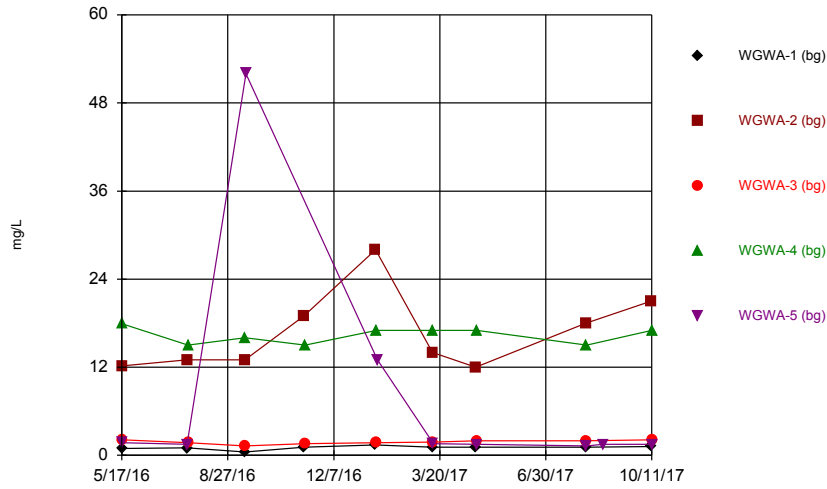
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Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



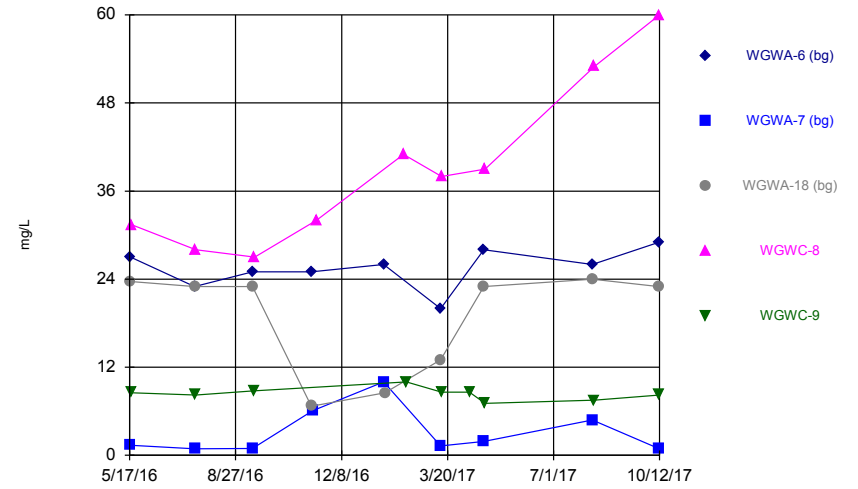
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Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



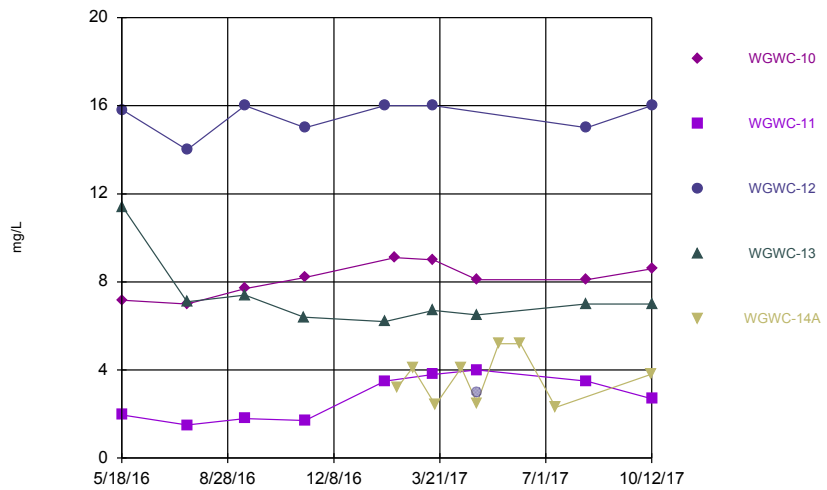
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 Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



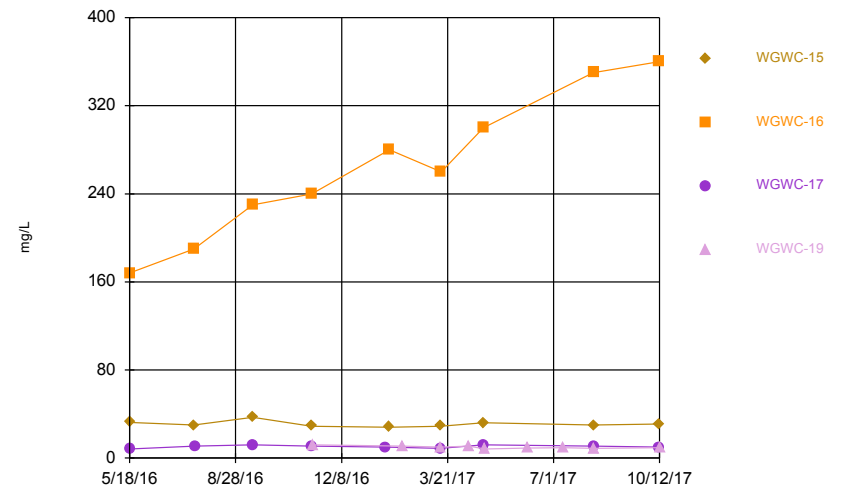
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 Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



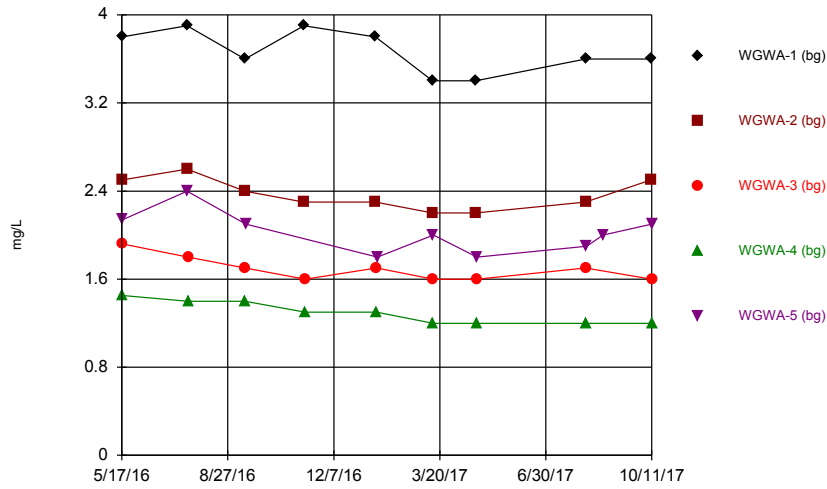
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 Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



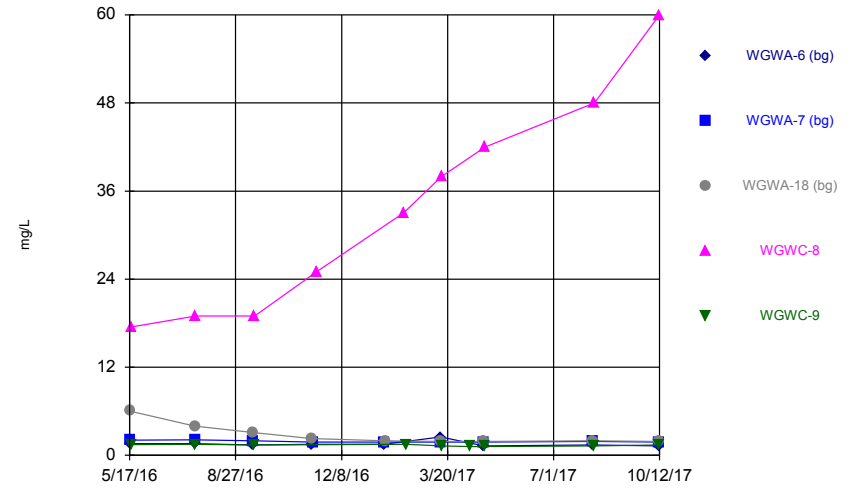
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 Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



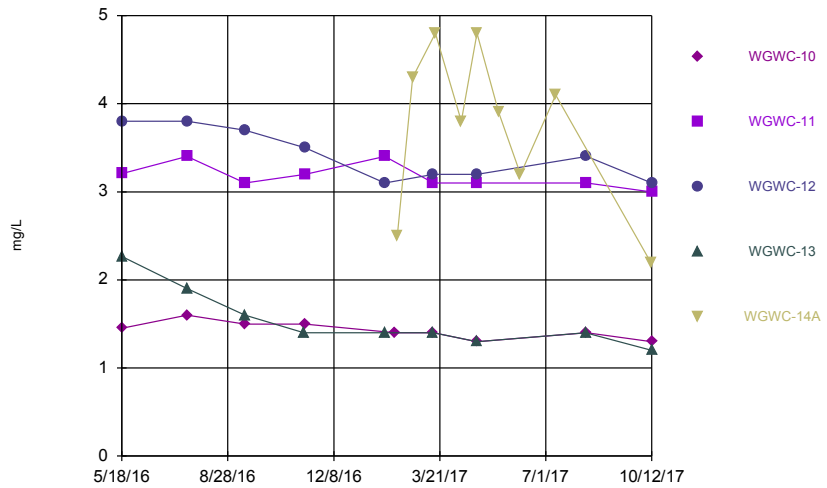
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 Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



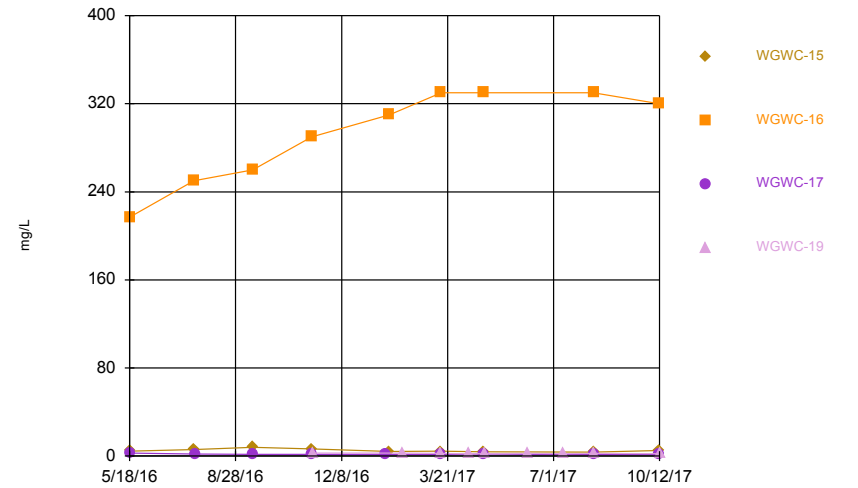
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 Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



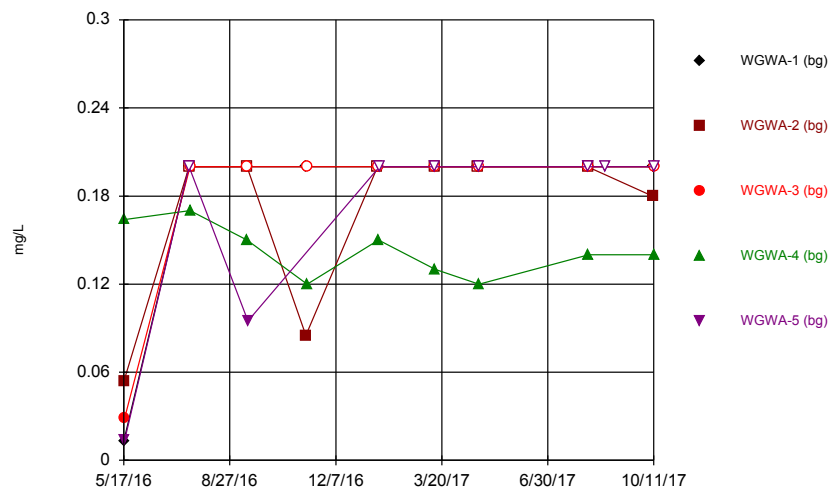
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 Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



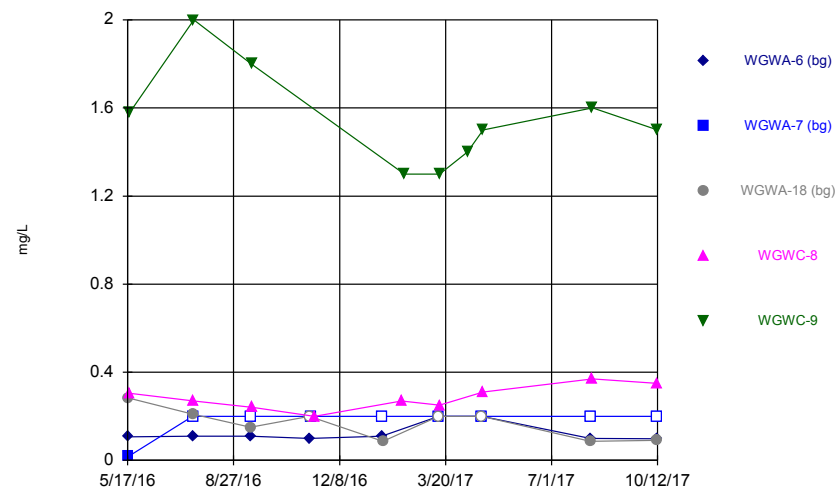
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 Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

### Time Series



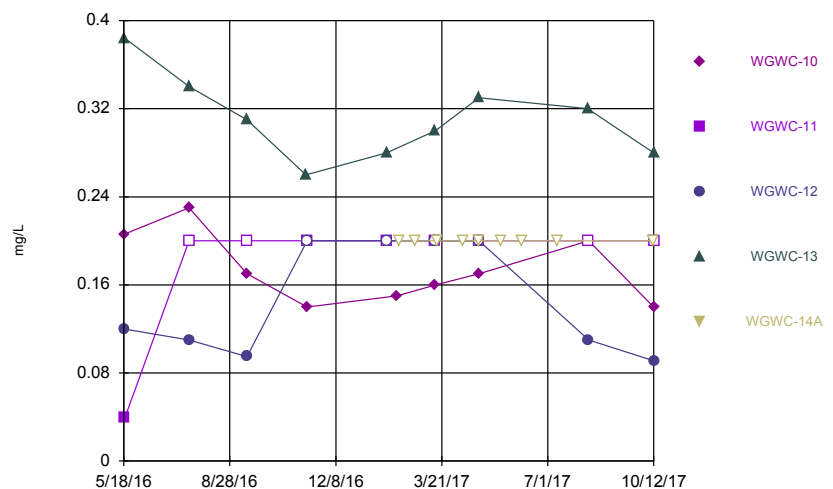
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Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

### Time Series



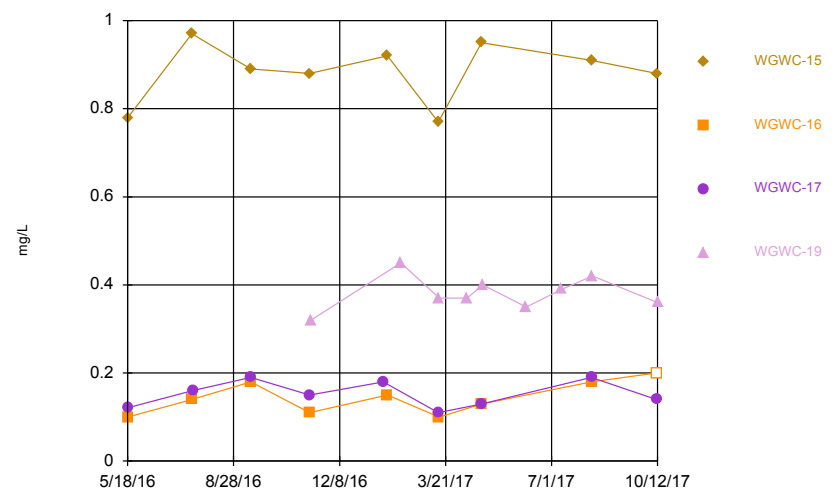
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Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

### Time Series



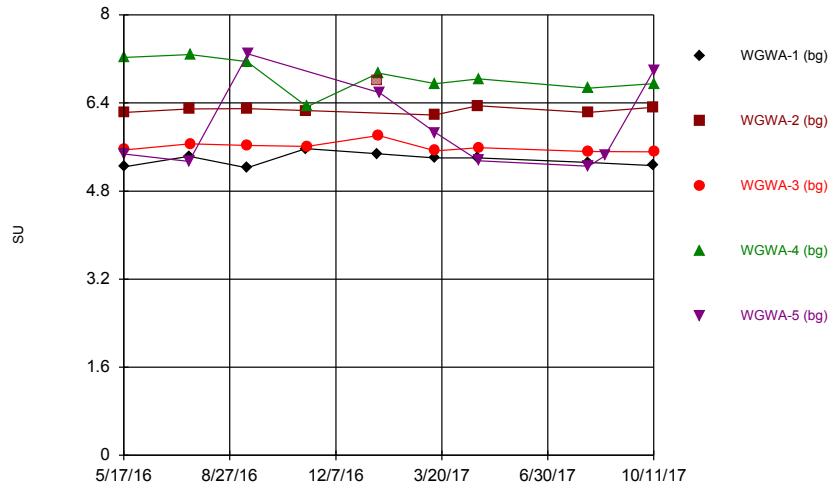
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Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

### Time Series



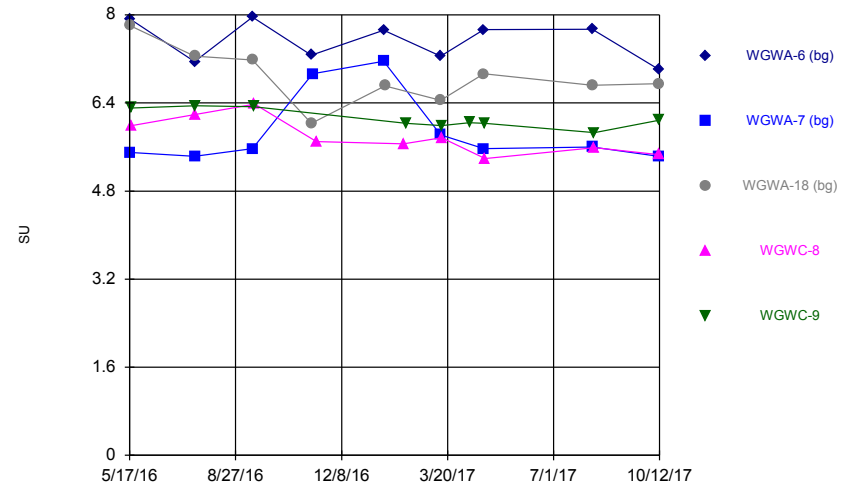
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Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



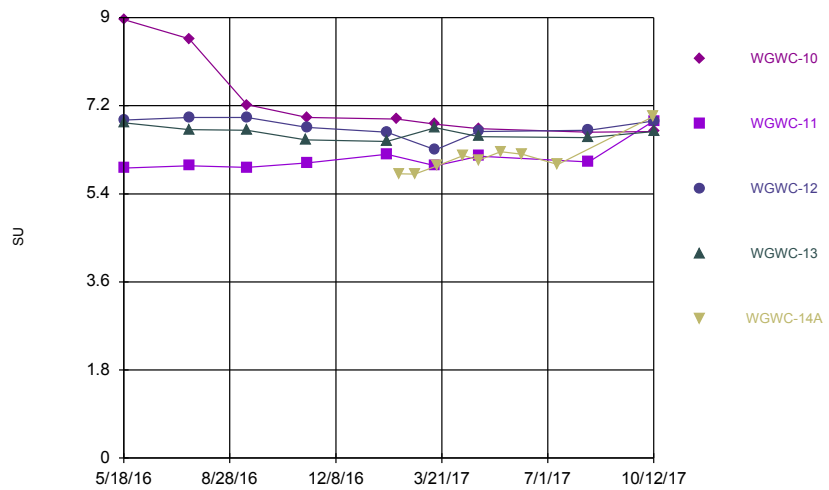
Constituent: pH Analysis Run 1/26/2018 5:27 PM View: 1. Time Series - All Wells  
 Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



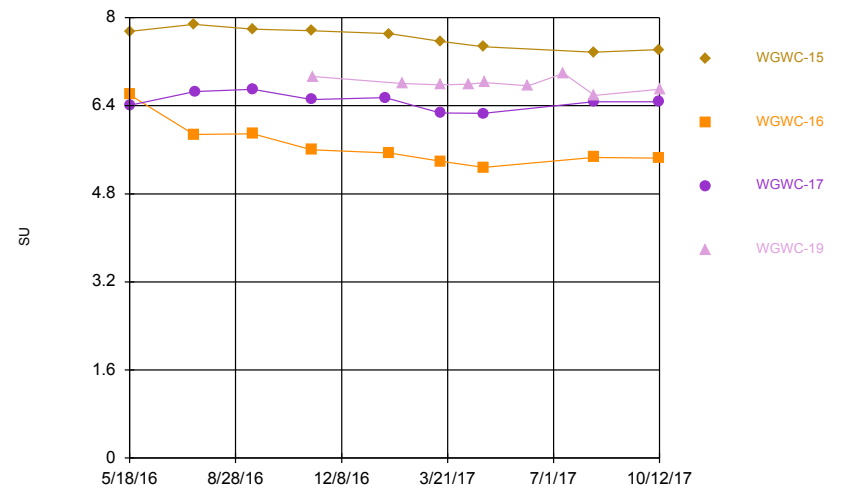
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 Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



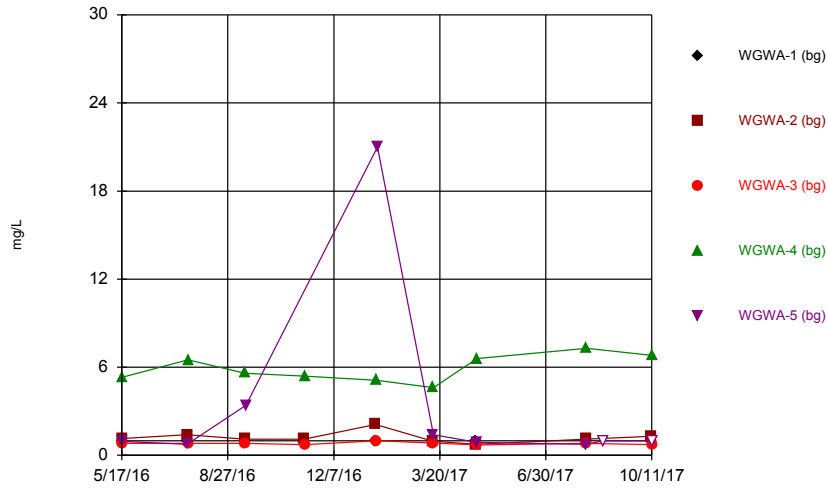
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 Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



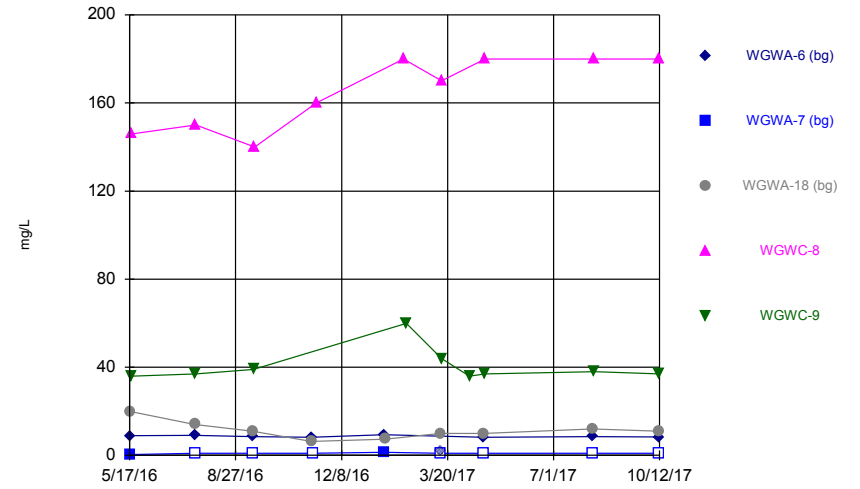
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 Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



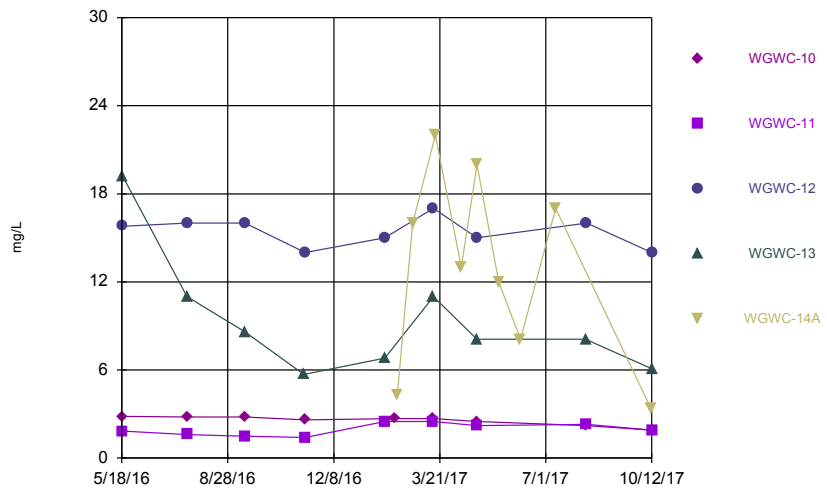
Constituent: Sulfate Analysis Run 1/26/2018 5:27 PM View: 1. Time Series - All Wells  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



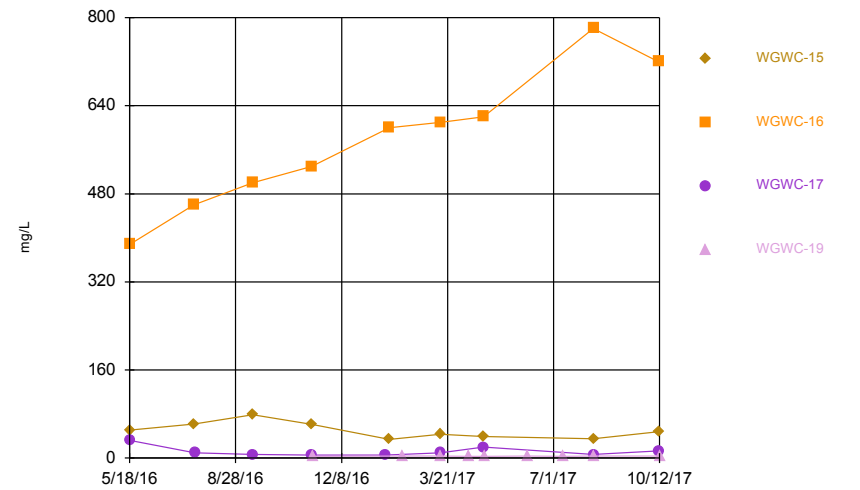
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Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



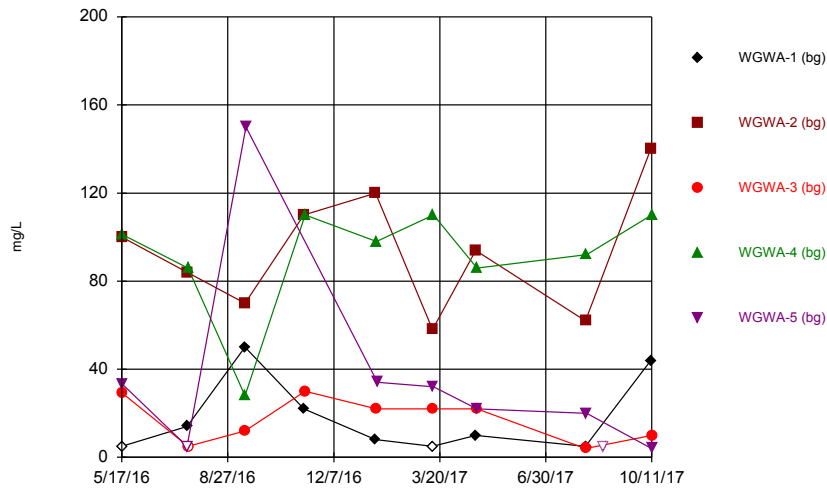
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Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



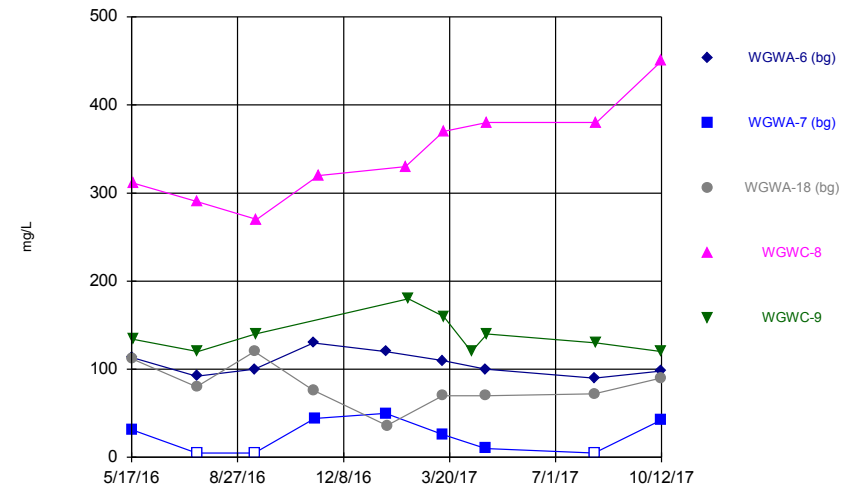
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Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



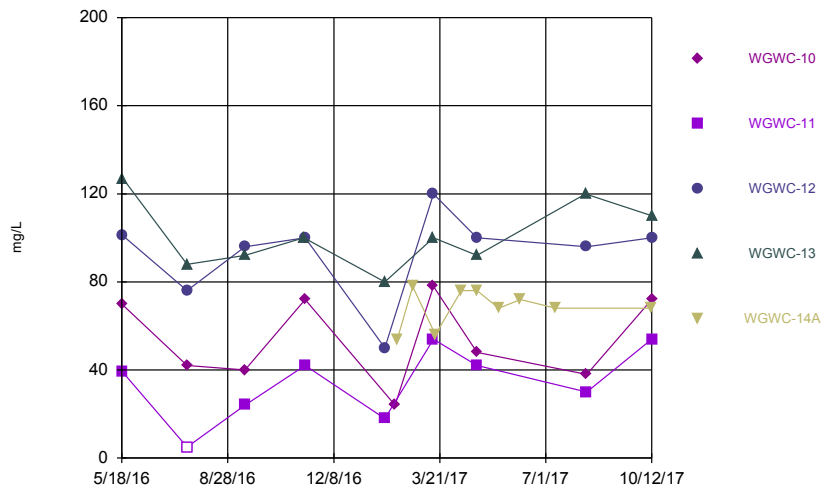
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Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



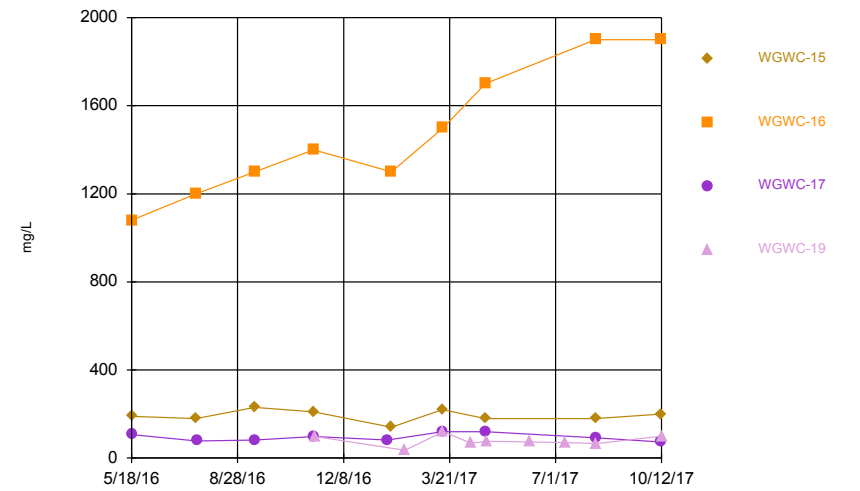
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Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



Constituent: Total Dissolved Solids Analysis Run 1/26/2018 5:27 PM View: 1. Time Series - All Wells  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Time Series



Constituent: Total Dissolved Solids Analysis Run 1/26/2018 5:27 PM View: 1. Time Series - All Wells  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126



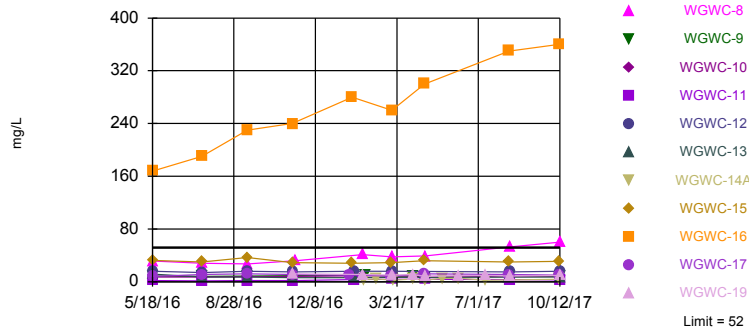
# Prediction Limit

Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126 Printed 1/26/2018, 5:32 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
<b>Calcium (mg/L)</b>	<b>WGWC-8</b>	<b>52</b>	<b>n/a</b>	<b>10/12/2017</b>	<b>60</b>	<b>Yes</b>	<b>72</b>	<b>0</b>	<b>n/a</b>	<b>0.000...</b>	<b>NP Inter (normality) ...</b>
Calcium (mg/L)	WGWC-9	52	n/a	10/12/2017	8.2	No	72	0	n/a	0.000...	NP Inter (normality) ...
Calcium (mg/L)	WGWC-10	52	n/a	10/12/2017	8.6	No	72	0	n/a	0.000...	NP Inter (normality) ...
Calcium (mg/L)	WGWC-11	52	n/a	10/12/2017	2.7	No	72	0	n/a	0.000...	NP Inter (normality) ...
Calcium (mg/L)	WGWC-12	52	n/a	10/12/2017	16	No	72	0	n/a	0.000...	NP Inter (normality) ...
Calcium (mg/L)	WGWC-13	52	n/a	10/12/2017	7	No	72	0	n/a	0.000...	NP Inter (normality) ...
Calcium (mg/L)	WGWC-14A	52	n/a	10/11/2017	3.8	No	72	0	n/a	0.000...	NP Inter (normality) ...
Calcium (mg/L)	WGWC-15	52	n/a	10/11/2017	31	No	72	0	n/a	0.000...	NP Inter (normality) ...
<b>Calcium (mg/L)</b>	<b>WGWC-16</b>	<b>52</b>	<b>n/a</b>	<b>10/11/2017</b>	<b>360</b>	<b>Yes</b>	<b>72</b>	<b>0</b>	<b>n/a</b>	<b>0.000...</b>	<b>NP Inter (normality) ...</b>
Calcium (mg/L)	WGWC-17	52	n/a	10/11/2017	10	No	72	0	n/a	0.000...	NP Inter (normality) ...
Calcium (mg/L)	WGWC-19	52	n/a	10/12/2017	9.5	No	72	0	n/a	0.000...	NP Inter (normality) ...
<b>Chloride (mg/L)</b>	<b>WGWC-8</b>	<b>6.05</b>	<b>n/a</b>	<b>10/12/2017</b>	<b>60</b>	<b>Yes</b>	<b>72</b>	<b>0</b>	<b>n/a</b>	<b>0.000...</b>	<b>NP Inter (normality) ...</b>
Chloride (mg/L)	WGWC-9	6.05	n/a	10/12/2017	1.4	No	72	0	n/a	0.000...	NP Inter (normality) ...
Chloride (mg/L)	WGWC-10	6.05	n/a	10/12/2017	1.3	No	72	0	n/a	0.000...	NP Inter (normality) ...
Chloride (mg/L)	WGWC-11	6.05	n/a	10/12/2017	3	No	72	0	n/a	0.000...	NP Inter (normality) ...
Chloride (mg/L)	WGWC-12	6.05	n/a	10/12/2017	3.1	No	72	0	n/a	0.000...	NP Inter (normality) ...
Chloride (mg/L)	WGWC-13	6.05	n/a	10/12/2017	1.2	No	72	0	n/a	0.000...	NP Inter (normality) ...
Chloride (mg/L)	WGWC-14A	6.05	n/a	10/11/2017	2.2	No	72	0	n/a	0.000...	NP Inter (normality) ...
Chloride (mg/L)	WGWC-15	6.05	n/a	10/11/2017	5	No	72	0	n/a	0.000...	NP Inter (normality) ...
<b>Chloride (mg/L)</b>	<b>WGWC-16</b>	<b>6.05</b>	<b>n/a</b>	<b>10/11/2017</b>	<b>320</b>	<b>Yes</b>	<b>72</b>	<b>0</b>	<b>n/a</b>	<b>0.000...</b>	<b>NP Inter (normality) ...</b>
Chloride (mg/L)	WGWC-17	6.05	n/a	10/11/2017	1.5	No	72	0	n/a	0.000...	NP Inter (normality) ...
Chloride (mg/L)	WGWC-19	6.05	n/a	10/12/2017	2.3	No	72	0	n/a	0.000...	NP Inter (normality) ...
<b>Fluoride (mg/L)</b>	<b>WGWC-8</b>	<b>0.284</b>	<b>n/a</b>	<b>10/12/2017</b>	<b>0.35</b>	<b>Yes</b>	<b>72</b>	<b>58.33</b>	<b>n/a</b>	<b>0.000...</b>	<b>NP Inter (NDs) 1 of 2</b>
<b>Fluoride (mg/L)</b>	<b>WGWC-9</b>	<b>0.284</b>	<b>n/a</b>	<b>10/12/2017</b>	<b>1.5</b>	<b>Yes</b>	<b>72</b>	<b>58.33</b>	<b>n/a</b>	<b>0.000...</b>	<b>NP Inter (NDs) 1 of 2</b>
Fluoride (mg/L)	WGWC-10	0.284	n/a	10/12/2017	0.14	No	72	58.33	n/a	0.000...	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	WGWC-11	0.284	n/a	10/12/2017	0.2ND	No	72	58.33	n/a	0.000...	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	WGWC-12	0.284	n/a	10/12/2017	0.091	No	72	58.33	n/a	0.000...	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	WGWC-13	0.284	n/a	10/12/2017	0.28	No	72	58.33	n/a	0.000...	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	WGWC-14A	0.284	n/a	10/11/2017	0.2ND	No	72	58.33	n/a	0.000...	NP Inter (NDs) 1 of 2
<b>Fluoride (mg/L)</b>	<b>WGWC-15</b>	<b>0.284</b>	<b>n/a</b>	<b>10/11/2017</b>	<b>0.88</b>	<b>Yes</b>	<b>72</b>	<b>58.33</b>	<b>n/a</b>	<b>0.000...</b>	<b>NP Inter (NDs) 1 of 2</b>
Fluoride (mg/L)	WGWC-16	0.284	n/a	10/11/2017	0.2ND	No	72	58.33	n/a	0.000...	NP Inter (NDs) 1 of 2
Fluoride (mg/L)	WGWC-17	0.284	n/a	10/11/2017	0.14	No	72	58.33	n/a	0.000...	NP Inter (NDs) 1 of 2
<b>Fluoride (mg/L)</b>	<b>WGWC-19</b>	<b>0.284</b>	<b>n/a</b>	<b>10/12/2017</b>	<b>0.36</b>	<b>Yes</b>	<b>72</b>	<b>58.33</b>	<b>n/a</b>	<b>0.000...</b>	<b>NP Inter (NDs) 1 of 2</b>
<b>Sulfate (mg/L)</b>	<b>WGWC-8</b>	<b>21</b>	<b>n/a</b>	<b>10/12/2017</b>	<b>180</b>	<b>Yes</b>	<b>71</b>	<b>25.35</b>	<b>n/a</b>	<b>0.000...</b>	<b>NP Inter (normality) ...</b>
<b>Sulfate (mg/L)</b>	<b>WGWC-9</b>	<b>21</b>	<b>n/a</b>	<b>10/12/2017</b>	<b>37</b>	<b>Yes</b>	<b>71</b>	<b>25.35</b>	<b>n/a</b>	<b>0.000...</b>	<b>NP Inter (normality) ...</b>
Sulfate (mg/L)	WGWC-10	21	n/a	10/12/2017	1.9	No	71	25.35	n/a	0.000...	NP Inter (normality) ...
Sulfate (mg/L)	WGWC-11	21	n/a	10/12/2017	1.9	No	71	25.35	n/a	0.000...	NP Inter (normality) ...
Sulfate (mg/L)	WGWC-12	21	n/a	10/12/2017	14	No	71	25.35	n/a	0.000...	NP Inter (normality) ...
Sulfate (mg/L)	WGWC-13	21	n/a	10/12/2017	6.1	No	71	25.35	n/a	0.000...	NP Inter (normality) ...
Sulfate (mg/L)	WGWC-14A	21	n/a	10/11/2017	3.4	No	71	25.35	n/a	0.000...	NP Inter (normality) ...
<b>Sulfate (mg/L)</b>	<b>WGWC-15</b>	<b>21</b>	<b>n/a</b>	<b>10/11/2017</b>	<b>48</b>	<b>Yes</b>	<b>71</b>	<b>25.35</b>	<b>n/a</b>	<b>0.000...</b>	<b>NP Inter (normality) ...</b>
<b>Sulfate (mg/L)</b>	<b>WGWC-16</b>	<b>21</b>	<b>n/a</b>	<b>10/11/2017</b>	<b>720</b>	<b>Yes</b>	<b>71</b>	<b>25.35</b>	<b>n/a</b>	<b>0.000...</b>	<b>NP Inter (normality) ...</b>
Sulfate (mg/L)	WGWC-17	21	n/a	10/11/2017	13	No	71	25.35	n/a	0.000...	NP Inter (normality) ...
Sulfate (mg/L)	WGWC-19	21	n/a	10/12/2017	3.6	No	71	25.35	n/a	0.000...	NP Inter (normality) ...

Exceeds Limit: WGWC-8, WGWC-16

Prediction Limit  
Interwell Non-parametric

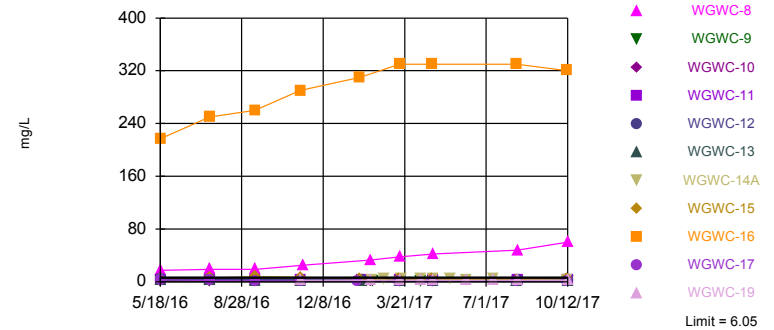


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 72 background values. Annual per-constituent alpha = 0.00803. Individual comparison alpha = 0.0003664 (1 of 2). Comparing 11 points to limit.

Constituent: Calcium Analysis Run 1/26/2018 5:31 PM View: 2A. Interwell UPL - Ca,Cl,FI,SO4  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Exceeds Limit: WGWC-8, WGWC-16

Prediction Limit  
Interwell Non-parametric



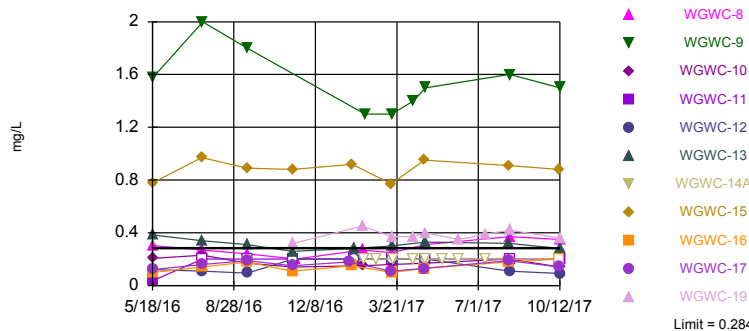
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 72 background values. Annual per-constituent alpha = 0.00803. Individual comparison alpha = 0.0003664 (1 of 2). Comparing 11 points to limit.

Constituent: Chloride Analysis Run 1/26/2018 5:31 PM View: 2A. Interwell UPL - Ca,Cl,FI,SO4  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Hollow symbols indicate censored values.

Exceeds Limit: WGWC-8, WGWC-9, WGWC-15, WGWC-19

Prediction Limit  
Interwell Non-parametric

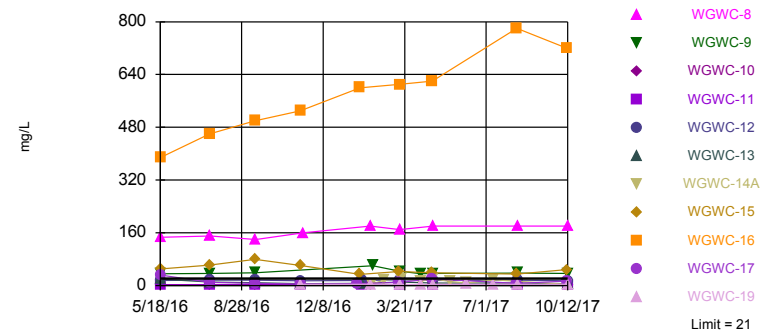


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 72 background values. 58.33% NDs. Annual per-constituent alpha = 0.00803. Individual comparison alpha = 0.0003664 (1 of 2). Comparing 11 points to limit.

Constituent: Fluoride Analysis Run 1/26/2018 5:31 PM View: 2A. Interwell UPL - Ca,Cl,FI,SO4  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Exceeds Limit: WGWC-8, WGWC-9, WGWC-15, WGWC-16

Prediction Limit  
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 71 background values. 25.35% NDs. Annual per-constituent alpha = 0.008221. Individual comparison alpha = 0.0003751 (1 of 2). Comparing 11 points to limit.

Constituent: Sulfate Analysis Run 1/26/2018 5:31 PM View: 2A. Interwell UPL - Ca,Cl,FI,SO4  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126



# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/26/2018 5:32 PM View: 2A. Interwell UPL - Ca,Cl,F,SO4

Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWC-10	WGWA-5 (bg)	WGWC-15	WGWC-12	WGWC-9	WGWC-8	WGWC-11	WGWC-13	WGWC-19
5/17/2016									
5/18/2016	7.17	1.7	32.5						
5/19/2016				15.8	8.53	31.4	1.95	11.4	
7/19/2016		1.5	30						
7/20/2016	7			14	8.2	28	1.5	7.1	
9/13/2016									
9/14/2016	7.7	52	37	16	8.8		1.8	7.4	
9/15/2016						27			
11/9/2016									
11/10/2016			29					6.4	
11/11/2016	8.2			15			1.7		12
11/14/2016						32			
1/17/2017									
1/18/2017									
1/19/2017		13							
1/20/2017									
1/24/2017			28						
1/27/2017				16			3.5	6.2	
2/6/2017	9.1					41			11
2/8/2017									
2/9/2017					10				
2/23/2017									
3/13/2017									
3/14/2017		1.6	29						
3/15/2017	9			16	8.6	38	3.8	6.7	10
3/17/2017									
4/11/2017					8.6				11
4/24/2017									
4/25/2017		1.5	32						
4/26/2017	8.1			3 (o)	7.1	39	4	6.5	8.4
5/17/2017									
6/7/2017									9
7/11/2017									9.5
8/8/2017									
8/9/2017		1.3	30					7	
8/10/2017	8.1			15	7.5	53	3.5		8.8
8/25/2017		1.5							
10/10/2017									
10/11/2017		1.5	31						
10/12/2017	8.6			16	8.2	60	2.7	7	9.5

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/26/2018 5:32 PM View: 2A. Interwell UPL - Ca,Cl,F,SO4  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

WGWC-14A

5/17/2016	
5/18/2016	
5/19/2016	
7/19/2016	
7/20/2016	
9/13/2016	
9/14/2016	
9/15/2016	
11/9/2016	
11/10/2016	
11/11/2016	
11/14/2016	
1/17/2017	
1/18/2017	
1/19/2017	
1/20/2017	
1/24/2017	
1/27/2017	
2/6/2017	
2/8/2017	3.2
2/9/2017	
2/23/2017	4.1
3/13/2017	
3/14/2017	
3/15/2017	
3/17/2017	2.4
4/11/2017	4.1
4/24/2017	
4/25/2017	
4/26/2017	2.5
5/17/2017	5.2
6/7/2017	5.2
7/11/2017	2.3
8/8/2017	
8/9/2017	
8/10/2017	
8/25/2017	
10/10/2017	
10/11/2017	3.8
10/12/2017	



# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/26/2018 5:32 PM View: 2A. Interwell UPL - Ca,Cl,F,SO4

Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWA-6 (bg)	WGWC-16	WGWA-7 (bg)	WGWC-11	WGWC-9	WGWC-12	WGWC-8	WGWC-13	WGWC-19
5/17/2016									
5/18/2016	1.58	217	2.06						
5/19/2016				3.21	1.46	3.8	17.5	2.26	
7/19/2016	1.6	250	2.1						
7/20/2016				3.4	1.5	3.8	19	1.9	
9/13/2016	1.4		2						
9/14/2016		260		3.1	1.4	3.7		1.6	
9/15/2016							19		
11/9/2016	1.5								
11/10/2016		290	1.8					1.4	
11/11/2016				3.2		3.5			2.6
11/14/2016							25		
1/17/2017									
1/18/2017	1.5		1.8						
1/19/2017									
1/20/2017									
1/24/2017		310							
1/27/2017				3.4		3.1		1.4	
2/6/2017							33		2.6
2/8/2017									
2/9/2017					1.5				
2/23/2017									
3/13/2017									
3/14/2017	2.5		1.8						
3/15/2017		330		3.1	1.3	3.2	38	1.4	2.4
3/17/2017									
4/11/2017					1.2				2.3
4/24/2017									
4/25/2017	1.3	330	1.8						
4/26/2017				3.1	1.2	3.2	42	1.3	2.3
5/17/2017									
6/7/2017									2.5
7/11/2017									2.3
8/8/2017	1.4		1.9						
8/9/2017		330						1.4	
8/10/2017				3.1	1.3	3.4	48		2.5
8/25/2017									
10/10/2017									
10/11/2017	1.3	320	1.8						
10/12/2017				3	1.4	3.1	60	1.2	2.3

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/26/2018 5:32 PM View: 2A. Interwell UPL - Ca,Cl,F,SO4  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

WGWC-14A

5/17/2016	
5/18/2016	
5/19/2016	
7/19/2016	
7/20/2016	
9/13/2016	
9/14/2016	
9/15/2016	
11/9/2016	
11/10/2016	
11/11/2016	
11/14/2016	
1/17/2017	
1/18/2017	
1/19/2017	
1/20/2017	
1/24/2017	
1/27/2017	
2/6/2017	
2/8/2017	2.5
2/9/2017	
2/23/2017	4.3
3/13/2017	
3/14/2017	
3/15/2017	
3/17/2017	4.8
4/11/2017	3.8
4/24/2017	
4/25/2017	
4/26/2017	4.8
5/17/2017	3.9
6/7/2017	3.2
7/11/2017	4.1
8/8/2017	
8/9/2017	
8/10/2017	
8/25/2017	
10/10/2017	
10/11/2017	2.2
10/12/2017	





# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/26/2018 5:32 PM View: 2A. Interwell UPL - Ca,Cl,F,SO4

Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWA-6 (bg)	WGWC-16	WGWA-7 (bg)	WGWC-11	WGWC-9	WGWC-12	WGWC-8	WGWC-13	WGWC-19
5/17/2016									
5/18/2016	0.106 (J)	0.1 (J)	0.018 (J)						
5/19/2016				0.039 (J)	1.58	0.12 (J)	0.304	0.384	
7/19/2016	0.11 (J)	0.14 (J)	<0.2						
7/20/2016				<0.2	2	0.11 (J)	0.27	0.34	
9/13/2016	0.11 (J)		<0.2						
9/14/2016		0.18 (J)		<0.2	1.8	0.095 (J)		0.31	
9/15/2016							0.24		
11/9/2016	0.1 (J)								
11/10/2016		0.11 (J)	<0.2					0.26	
11/11/2016				<0.2		<0.2			0.32
11/14/2016							0.2		
1/17/2017									
1/18/2017	0.11 (J)		<0.2						
1/19/2017									
1/20/2017									
1/24/2017		0.15 (J)							
1/27/2017				<0.2		<0.2		0.28	
2/6/2017							0.27		0.45
2/8/2017									
2/9/2017					1.3				
2/23/2017									
3/13/2017									
3/14/2017	<0.2		<0.2						
3/15/2017		0.1 (J)		<0.2	1.3	<0.2	0.25	0.3	0.37
3/17/2017									
4/11/2017					1.4				0.37
4/24/2017									
4/25/2017	<0.2	0.13 (J)	<0.2						
4/26/2017				<0.2	1.5	<0.2	0.31	0.33	0.4
5/17/2017									
6/7/2017									0.35
7/11/2017									0.39
8/8/2017	0.099 (J)		<0.2						
8/9/2017		0.18 (J)						0.32	
8/10/2017				<0.2	1.6	0.11 (J)	0.37		0.42
8/25/2017									
10/10/2017									
10/11/2017	0.098 (J)	<0.2	<0.2						
10/12/2017				<0.2	1.5	0.091 (J)	0.35	0.28	0.36

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/26/2018 5:32 PM View: 2A. Interwell UPL - Ca,Cl,F,SO4  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

WGWC-14A

5/17/2016	
5/18/2016	
5/19/2016	
7/19/2016	
7/20/2016	
9/13/2016	
9/14/2016	
9/15/2016	
11/9/2016	
11/10/2016	
11/11/2016	
11/14/2016	
1/17/2017	
1/18/2017	
1/19/2017	
1/20/2017	
1/24/2017	
1/27/2017	
2/6/2017	
2/8/2017	<0.2
2/9/2017	
2/23/2017	<0.2
3/13/2017	
3/14/2017	
3/15/2017	
3/17/2017	<0.2
4/11/2017	<0.2
4/24/2017	
4/25/2017	
4/26/2017	<0.2
5/17/2017	<0.2
6/7/2017	<0.2
7/11/2017	<0.2
8/8/2017	
8/9/2017	
8/10/2017	
8/25/2017	
10/10/2017	
10/11/2017	<0.2
10/12/2017	



# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 5:32 PM View: 2A. Interwell UPL - Ca,Ci,FI,SO4

Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWA-6 (bg)	WGWC-16	WGWA-7 (bg)	WGWC-11	WGWC-9	WGWC-12	WGWC-8	WGWC-13	WGWC-19
5/17/2016									
5/18/2016	8.88	388	0.368 (J)						
5/19/2016				1.83	35.9	15.8	146	19.2	
7/19/2016	9	460	<1						
7/20/2016				1.6	37	16	150	11	
9/13/2016	8.5		<1						
9/14/2016		500		1.5 (B)	39 (B)	16 (B)		8.6 (B)	
9/15/2016							140		
11/9/2016	8.2								
11/10/2016		530	<1					5.7	
11/11/2016				1.4		14			3.4
11/14/2016							160		
1/17/2017									
1/18/2017	9.4		1.4						
1/19/2017									
1/20/2017									
1/24/2017		600							
1/27/2017				2.5		15		6.8	
2/6/2017							180		3.7
2/8/2017									
2/9/2017					60				
2/23/2017									
3/13/2017									
3/14/2017	2 (o)		<1						
3/15/2017		610		2.5	44	17	170	11	3.6
3/17/2017									
4/11/2017					36				3.2
4/24/2017									
4/25/2017	8.2	620	<1						
4/26/2017				2.2	37	15	180	8.1	3.3
5/17/2017									
6/7/2017									3.8
7/11/2017									3.3
8/8/2017	8.5		<1						
8/9/2017		780						8.1	
8/10/2017				2.3	38	16	180		3.7
8/25/2017									
10/10/2017									
10/11/2017	8.3	720	<1						
10/12/2017				1.9	37	14	180	6.1	3.6

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 5:32 PM View: 2A. Interwell UPL - Ca,Cl,FI,SO4  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

WGWC-14A

5/17/2016	
5/18/2016	
5/19/2016	
7/19/2016	
7/20/2016	
9/13/2016	
9/14/2016	
9/15/2016	
11/9/2016	
11/10/2016	
11/11/2016	
11/14/2016	
1/17/2017	
1/18/2017	
1/19/2017	
1/20/2017	
1/24/2017	
1/27/2017	
2/6/2017	
2/8/2017	4.3
2/9/2017	
2/23/2017	16
3/13/2017	
3/14/2017	
3/15/2017	
3/17/2017	22
4/11/2017	13
4/24/2017	
4/25/2017	
4/26/2017	20
5/17/2017	12 (F1)
6/7/2017	8.1
7/11/2017	17
8/8/2017	
8/9/2017	
8/10/2017	
8/25/2017	
10/10/2017	
10/11/2017	3.4
10/12/2017	

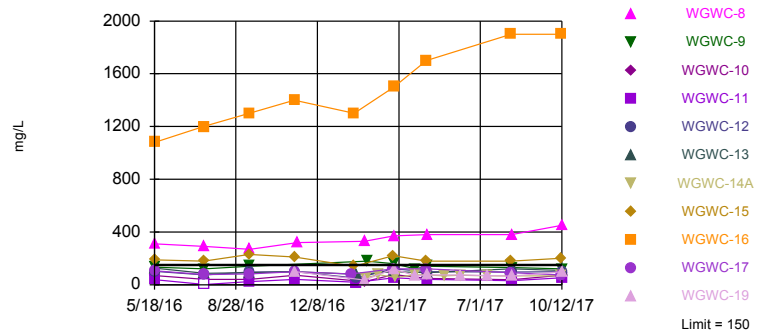
# Prediction Limit

Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126 Printed 1/26/2018, 5:33 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
<b>Total Dissolved Solids (mg/L)</b>	<b>WGWC-8</b>	<b>150</b>	<b>n/a</b>	<b>10/12/2017</b>	<b>450</b>	<b>Yes</b>	<b>71</b>	<b>11.27</b>	<b>n/a</b>	<b>0.000...</b>	<b>NP Inter (normality) ...</b>
Total Dissolved Solids (mg/L)	WGWC-9	150	n/a	10/12/2017	120	No	71	11.27	n/a	0.000...	NP Inter (normality) ...
Total Dissolved Solids (mg/L)	WGWC-10	150	n/a	10/12/2017	72	No	71	11.27	n/a	0.000...	NP Inter (normality) ...
Total Dissolved Solids (mg/L)	WGWC-11	150	n/a	10/12/2017	54	No	71	11.27	n/a	0.000...	NP Inter (normality) ...
Total Dissolved Solids (mg/L)	WGWC-12	150	n/a	10/12/2017	100	No	71	11.27	n/a	0.000...	NP Inter (normality) ...
Total Dissolved Solids (mg/L)	WGWC-13	150	n/a	10/12/2017	110	No	71	11.27	n/a	0.000...	NP Inter (normality) ...
Total Dissolved Solids (mg/L)	WGWC-14A	150	n/a	10/11/2017	68	No	71	11.27	n/a	0.000...	NP Inter (normality) ...
<b>Total Dissolved Solids (mg/L)</b>	<b>WGWC-15</b>	<b>150</b>	<b>n/a</b>	<b>10/11/2017</b>	<b>200</b>	<b>Yes</b>	<b>71</b>	<b>11.27</b>	<b>n/a</b>	<b>0.000...</b>	<b>NP Inter (normality) ...</b>
<b>Total Dissolved Solids (mg/L)</b>	<b>WGWC-16</b>	<b>150</b>	<b>n/a</b>	<b>10/11/2017</b>	<b>1900</b>	<b>Yes</b>	<b>71</b>	<b>11.27</b>	<b>n/a</b>	<b>0.000...</b>	<b>NP Inter (normality) ...</b>
Total Dissolved Solids (mg/L)	WGWC-17	150	n/a	10/11/2017	74	No	71	11.27	n/a	0.000...	NP Inter (normality) ...
Total Dissolved Solids (mg/L)	WGWC-19	150	n/a	10/12/2017	100	No	71	11.27	n/a	0.000...	NP Inter (normality) ...

Exceeds Limit: WGWC-8, WGWC-15,  
WGWC-16

### Prediction Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 71 background values. 11.27% NDs. Annual per-constituent alpha = 0.008221. Individual comparison alpha = 0.0003751 (1 of 2). Comparing 11 points to limit.

Constituent: Total Dissolved Solids Analysis Run 1/26/2018 5:33 PM View: 2B. Interwell UPL - TDS  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126



# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/26/2018 5:33 PM View: 2B. Interwell UPL - TDS

Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWA-2 (bg)	WGWA-18 (bg)	WGWA-1 (bg)	WGWA-4 (bg)	WGWA-3 (bg)	WGWC-10	WGWC-17	WGWA-5 (bg)	WGWC-15
5/17/2016	100	112	<5						
5/18/2016				101	29	70	107	33	190
5/19/2016									
7/19/2016	84	80	14					<5	180
7/20/2016				86	<5	42	78		
9/13/2016	70	120	50	28	12				
9/14/2016						40	82	150	230
9/15/2016									
11/9/2016	110	76	22						
11/10/2016				110	30		98		210
11/11/2016						72			
11/14/2016									
1/17/2017	120		8						
1/18/2017				98	22				
1/19/2017		36						34	
1/20/2017							82		
1/24/2017									140
1/27/2017									
2/6/2017						24			
2/8/2017									
2/9/2017									
2/23/2017									
3/13/2017	58		<5						
3/14/2017		70		110	22		120	32	220
3/15/2017						78			
3/17/2017									
4/11/2017									
4/24/2017	94		10						
4/25/2017		70		86	22		120	22	180
4/26/2017						48			
5/17/2017									
6/7/2017									
7/11/2017									
8/8/2017	62	72	<5		4 (J)				
8/9/2017				92			92	20	180
8/10/2017						38			
8/25/2017								<5 (o)	
10/10/2017	140		44						
10/11/2017		90		110	10		74	4 (J)	200
10/12/2017						72			

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/26/2018 5:33 PM View: 2B. Interwell UPL - TDS

Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWA-7 (bg)	WGWA-6 (bg)	WGWC-16	WGWC-9	WGWC-13	WGWC-8	WGWC-11	WGWC-12	WGWC-19
5/17/2016									
5/18/2016	31	113	1080						
5/19/2016				134	127	311	39	101	
7/19/2016	<5	92	1200						
7/20/2016				120	88	290	<5	76	
9/13/2016	<5	100							
9/14/2016			1300	140	92		24	96	
9/15/2016						270			
11/9/2016		130							
11/10/2016	44		1400		100				
11/11/2016							42	100	98
11/14/2016						320			
1/17/2017									
1/18/2017	50	120							
1/19/2017									
1/20/2017									
1/24/2017			1300						
1/27/2017					80		18	50	
2/6/2017						330			36
2/8/2017									
2/9/2017				180					
2/23/2017									
3/13/2017									
3/14/2017	26	110							
3/15/2017			1500	160	100	370	54	120	120
3/17/2017									
4/11/2017				120					68
4/24/2017									
4/25/2017	10	100	1700						
4/26/2017				140	92	380	42	100	76
5/17/2017									
6/7/2017									74
7/11/2017									70
8/8/2017	<5	90							
8/9/2017			1900		120				
8/10/2017				130		380	30	96	66
8/25/2017									
10/10/2017									
10/11/2017	42	98	1900						
10/12/2017				120	110	450	54	100	100

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/26/2018 5:33 PM View: 2B. Interwell UPL - TDS  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

WGWC-14A

5/17/2016	
5/18/2016	
5/19/2016	
7/19/2016	
7/20/2016	
9/13/2016	
9/14/2016	
9/15/2016	
11/9/2016	
11/10/2016	
11/11/2016	
11/14/2016	
1/17/2017	
1/18/2017	
1/19/2017	
1/20/2017	
1/24/2017	
1/27/2017	
2/6/2017	
2/8/2017	54
2/9/2017	
2/23/2017	78
3/13/2017	
3/14/2017	
3/15/2017	
3/17/2017	56
4/11/2017	76
4/24/2017	
4/25/2017	
4/26/2017	76
5/17/2017	68
6/7/2017	72
7/11/2017	68
8/8/2017	
8/9/2017	
8/10/2017	
8/25/2017	
10/10/2017	
10/11/2017	68
10/12/2017	

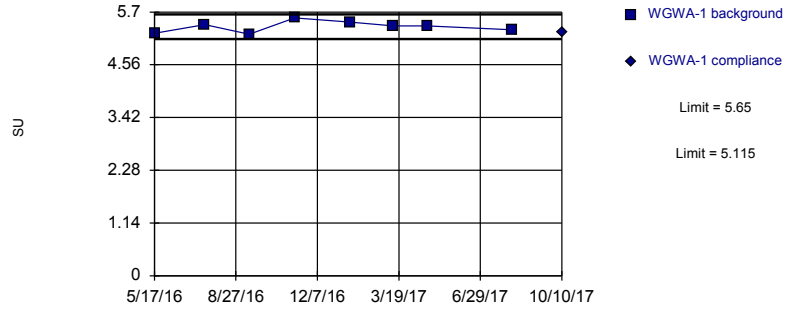
# Prediction Limit

Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126 Printed 1/30/2018, 2:48 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
pH (SU)	WGWA-1	5.65	5.115	10/10/2017	5.26	No	8	0	No	0.000342	Param Intra 1 of 3
pH (SU)	WGWA-2	6.404	6.122	10/10/2017	6.32	No	7	0	No	0.000342	Param Intra 1 of 3
pH (SU)	WGWA-3	5.824	5.401	10/11/2017	5.51	No	8	0	No	0.000342	Param Intra 1 of 3
pH (SU)	WGWA-4	7.623	6.175	10/11/2017	6.75	No	8	0	No	0.000342	Param Intra 1 of 3
pH (SU)	WGWA-5	7.486	4.162	10/11/2017	6.99	No	8	0	No	0.000342	Param Intra 1 of 3
pH (SU)	WGWA-6	8.314	6.871	10/11/2017	7.01	No	8	0	No	0.000342	Param Intra 1 of 3
pH (SU)	WGWA-7	7.16	5.43	10/11/2017	5.43	No	8	0	n/a	0.01182	NP Intra (normality) ...
pH (SU)	WGWA-18	8.108	5.662	10/11/2017	6.75	No	8	0	No	0.000342	Param Intra 1 of 3
pH (SU)	WGWC-8	6.576	5.091	10/12/2017	5.46	No	8	0	No	0.000342	Param Intra 1 of 3
pH (SU)	WGWC-9	6.535	5.7	10/12/2017	6.09	No	8	0	No	0.000342	Param Intra 1 of 3
pH (SU)	WGWC-10	9.368	5.344	10/12/2017	6.67	No	8	0	No	0.000342	Param Intra 1 of 3
<b>pH (SU)</b>	<b>WGWC-11</b>	<b>6.271</b>	<b>5.796</b>	<b>10/12/2017</b>	<b>6.89</b>	<b>Yes</b>	<b>8</b>	<b>0</b>	<b>No</b>	<b>0.000342</b>	<b>Param Intra 1 of 3</b>
pH (SU)	WGWC-12	7.232	6.248	10/12/2017	6.89	No	8	0	No	0.000342	Param Intra 1 of 3
pH (SU)	WGWC-13	6.94	6.335	10/12/2017	6.67	No	8	0	No	0.000342	Param Intra 1 of 3
<b>pH (SU)</b>	<b>WGWC-14A</b>	<b>6.437</b>	<b>5.643</b>	<b>10/11/2017</b>	<b>6.97</b>	<b>Yes</b>	<b>8</b>	<b>0</b>	<b>No</b>	<b>0.000342</b>	<b>Param Intra 1 of 3</b>
pH (SU)	WGWC-15	8.057	7.268	10/11/2017	7.42	No	8	0	No	0.000342	Param Intra 1 of 3
pH (SU)	WGWC-16	6.656	4.754	10/11/2017	5.45	No	8	0	No	0.000342	Param Intra 1 of 3
pH (SU)	WGWC-17	6.845	6.113	10/11/2017	6.47	No	8	0	No	0.000342	Param Intra 1 of 3
pH (SU)	WGWC-19	7.076	6.539	10/12/2017	6.7	No	8	0	No	0.000342	Param Intra 1 of 3

Within Limits

Prediction Limit  
Intrawell Parametric

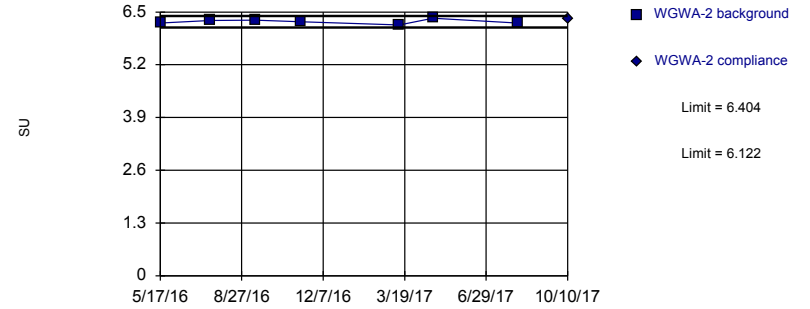


Background Data Summary: Mean=5.383, Std. Dev.=0.1184, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9598, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: pH Analysis Run 1/30/2018 2:46 PM View: 3. Intrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Within Limits

Prediction Limit  
Intrawell Parametric

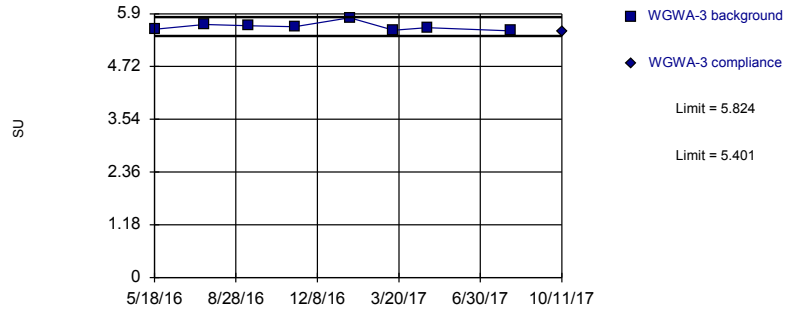


Background Data Summary: Mean=6.263, Std. Dev.=0.05589, n=7. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9808, critical = 0.73. Kappa = 2.527 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: pH Analysis Run 1/30/2018 2:46 PM View: 3. Intrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Within Limits

Prediction Limit  
Intrawell Parametric

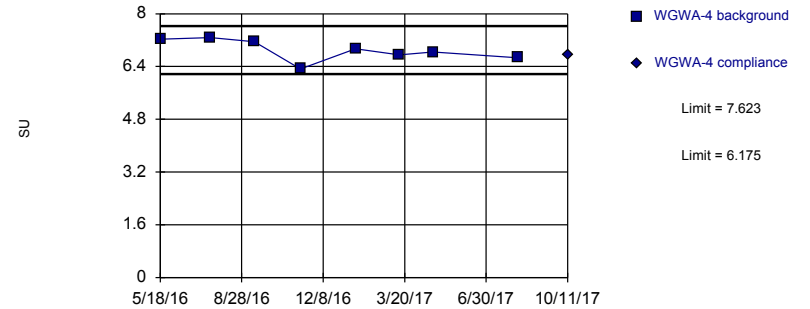


Background Data Summary: Mean=5.613, Std. Dev.=0.09362, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8751, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: pH Analysis Run 1/30/2018 2:46 PM View: 3. Intrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Within Limits

Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=6.899, Std. Dev.=0.321, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9492, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: pH Analysis Run 1/30/2018 2:46 PM View: 3. Intrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

# Prediction Limit

Constituent: pH (SU) Analysis Run 1/30/2018 2:48 PM View: 3. Inrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWA-1	WGWA-1
5/17/2016	5.24	
7/19/2016	5.43	
9/13/2016	5.22	
11/9/2016	5.57	
1/17/2017	5.48	
3/13/2017	5.4	
4/24/2017	5.4	
8/8/2017	5.32	
10/10/2017		5.26

# Prediction Limit

Constituent: pH (SU) Analysis Run 1/30/2018 2:48 PM View: 3. Inrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWA-2	WGWA-2
5/17/2016	6.23	
7/19/2016	6.29	
9/13/2016	6.3	
11/9/2016	6.26	
1/17/2017	6.8 (O)	
3/13/2017	6.18	
4/24/2017	6.35	
8/8/2017	6.23	
10/10/2017		6.32

# Prediction Limit

Constituent: pH (SU) Analysis Run 1/30/2018 2:48 PM View: 3. IntraWell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWA-3	WGWA-3
5/18/2016	5.55	
7/20/2016	5.66	
9/13/2016	5.63	
11/10/2016	5.61	
1/18/2017	5.81	
3/14/2017	5.53	
4/25/2017	5.59	
8/8/2017	5.52	
10/11/2017		5.51



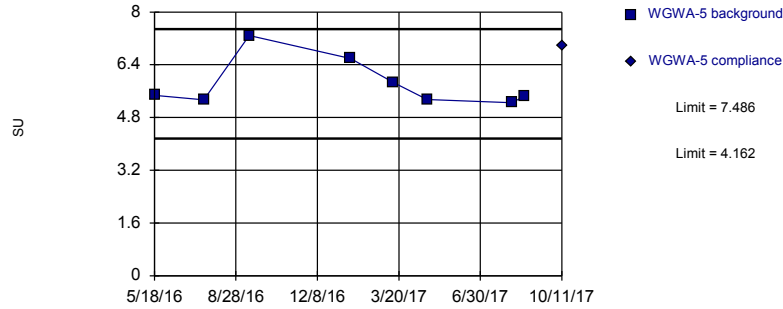
# Prediction Limit

Constituent: pH (SU) Analysis Run 1/30/2018 2:48 PM View: 3. IntraWell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWA-4	WGWA-4
5/18/2016	7.23	
7/20/2016	7.28	
9/13/2016	7.15	
11/10/2016	6.33	
1/18/2017	6.94	
3/14/2017	6.75	
4/25/2017	6.84	
8/9/2017	6.67	
10/11/2017		6.75

Within Limits

Prediction Limit  
Intrawell Parametric

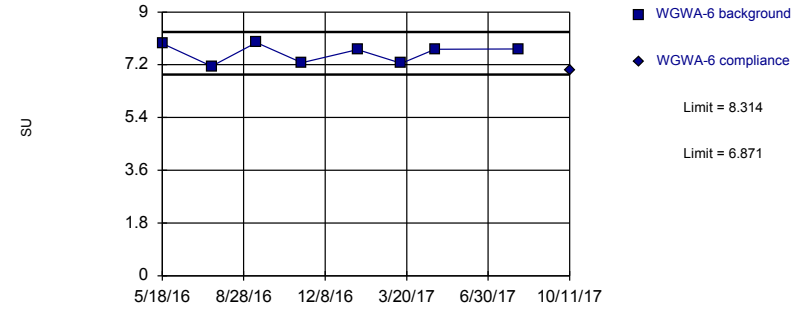


Background Data Summary: Mean=5.824, Std. Dev.=0.7366, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7795, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: pH Analysis Run 1/30/2018 2:46 PM View: 3. Intrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Within Limits

Prediction Limit  
Intrawell Parametric

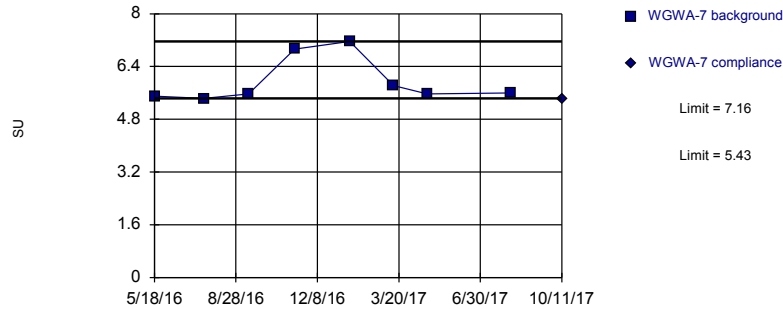


Background Data Summary: Mean=7.593, Std. Dev.=0.3199, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8595, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: pH Analysis Run 1/30/2018 2:46 PM View: 3. Intrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Within Limits

Prediction Limit  
Intrawell Non-parametric

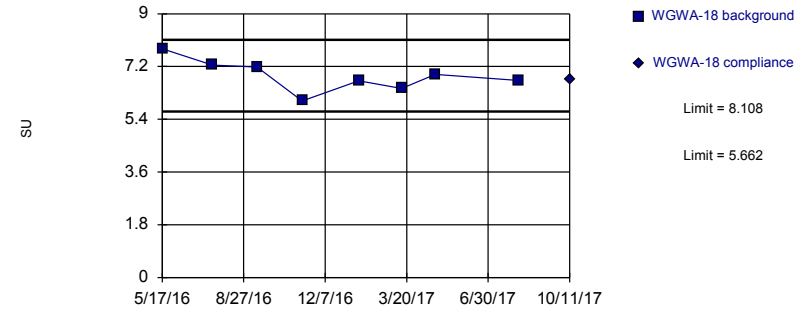


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 8 background values. Well-constituent pair annual alpha = 0.02358. Individual comparison alpha = 0.01182 (1 of 3).

Constituent: pH Analysis Run 1/30/2018 2:46 PM View: 3. Intrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Within Limits

Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=6.885, Std. Dev.=0.542, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9864, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: pH Analysis Run 1/30/2018 2:46 PM View: 3. Intrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

# Prediction Limit

Constituent: pH (SU) Analysis Run 1/30/2018 2:48 PM View: 3. Inrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWA-5	WGWA-5
5/18/2016	5.47	
7/19/2016	5.34	
9/14/2016	7.29	
1/19/2017	6.59	
3/14/2017	5.86	
4/25/2017	5.35	
8/9/2017	5.25	
8/25/2017	5.44	
10/11/2017		6.99

# Prediction Limit

Constituent: pH (SU) Analysis Run 1/30/2018 2:48 PM View: 3. IntraWell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWA-6	WGWA-6
5/18/2016	7.92	
7/19/2016	7.15	
9/13/2016	7.96	
11/9/2016	7.27	
1/18/2017	7.72	
3/14/2017	7.25	
4/25/2017	7.73	
8/8/2017	7.74	
10/11/2017		7.01

# Prediction Limit

Constituent: pH (SU) Analysis Run 1/30/2018 2:48 PM View: 3. Inrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWA-7	WGWA-7
5/18/2016	5.5	
7/19/2016	5.43	
9/13/2016	5.57	
11/10/2016	6.93	
1/18/2017	7.16	
3/14/2017	5.82	
4/25/2017	5.57	
8/8/2017	5.6	
10/11/2017		5.43

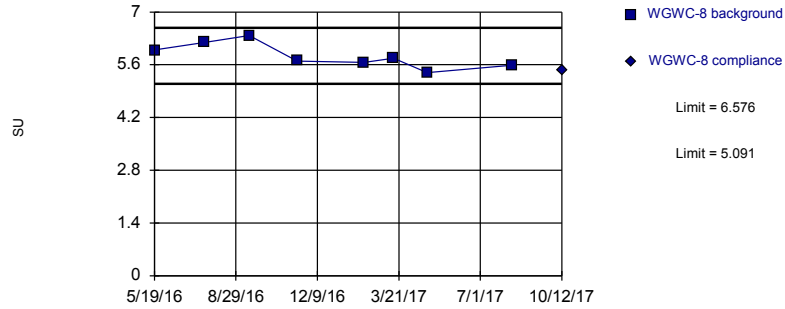
# Prediction Limit

Constituent: pH (SU) Analysis Run 1/30/2018 2:48 PM View: 3. IntraWell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWA-18	WGWA-18
5/17/2016	7.81	
7/19/2016	7.25	
9/13/2016	7.18	
11/9/2016	6.03	
1/19/2017	6.71	
3/14/2017	6.45	
4/25/2017	6.93	
8/8/2017	6.72	
10/11/2017		6.75

Within Limits

### Prediction Limit Intrawell Parametric

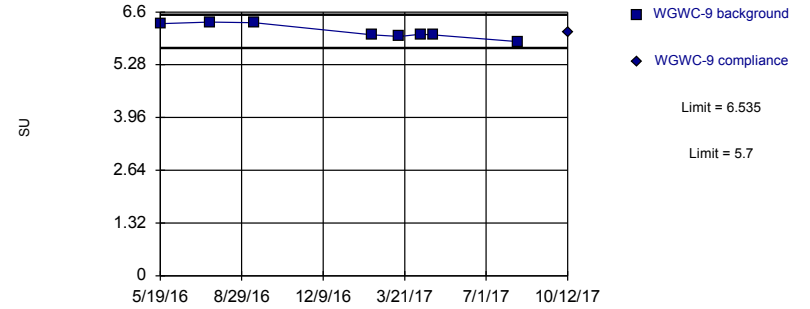


Background Data Summary: Mean=5.834, Std. Dev.=0.3291, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9539, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: pH Analysis Run 1/30/2018 2:46 PM View: 3. Intrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Within Limits

### Prediction Limit Intrawell Parametric

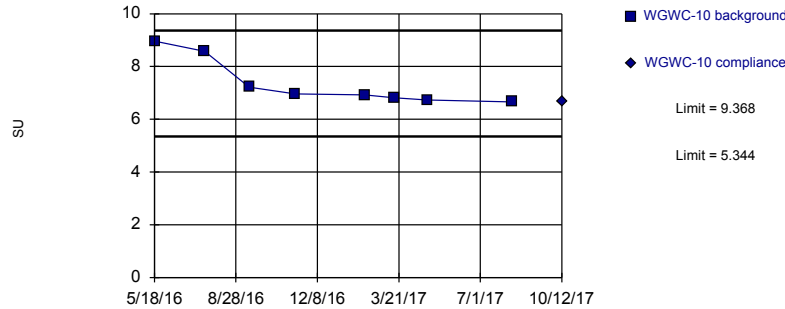


Background Data Summary: Mean=6.118, Std. Dev.=0.1852, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8563, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: pH Analysis Run 1/30/2018 2:46 PM View: 3. Intrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Within Limits

### Prediction Limit Intrawell Parametric

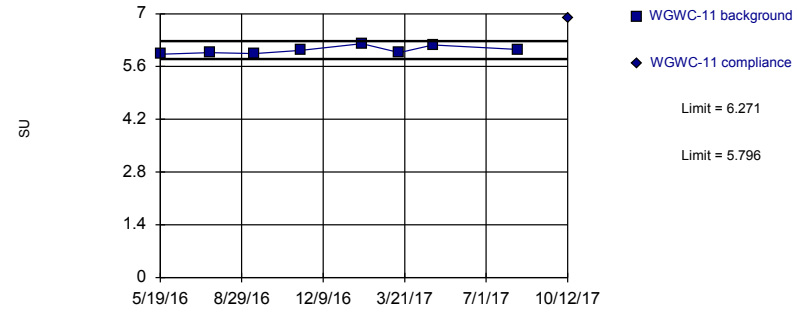


Background Data Summary: Mean=7.356, Std. Dev.=0.8918, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7516, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: pH Analysis Run 1/30/2018 2:46 PM View: 3. Intrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Exceeds Limits

### Prediction Limit Intrawell Parametric



Background Data Summary: Mean=6.034, Std. Dev.=0.1053, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8682, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: pH Analysis Run 1/30/2018 2:46 PM View: 3. Intrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

# Prediction Limit

Constituent: pH (SU) Analysis Run 1/30/2018 2:48 PM View: 3. IntraWell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWC-8	WGWC-8
5/19/2016	5.99	
7/20/2016	6.19	
9/15/2016	6.38	
11/14/2016	5.7	
2/6/2017	5.66	
3/15/2017	5.77	
4/26/2017	5.39	
8/10/2017	5.59	
10/12/2017		5.46



# Prediction Limit

Constituent: pH (SU) Analysis Run 1/30/2018 2:48 PM View: 3. Inrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWC-9	WGWC-9
5/19/2016	6.31	
7/20/2016	6.35	
9/14/2016	6.33	
2/9/2017	6.03	
3/15/2017	5.99	
4/11/2017	6.04	
4/26/2017	6.03	
8/10/2017	5.86	
10/12/2017		6.09

# Prediction Limit

Constituent: pH (SU) Analysis Run 1/30/2018 2:48 PM View: 3. Inrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWC-10	WGWC-10
5/18/2016	8.96	
7/20/2016	8.57	
9/14/2016	7.22	
11/11/2016	6.96	
2/6/2017	6.93	
3/15/2017	6.82	
4/26/2017	6.73	
8/10/2017	6.66	
10/12/2017		6.67

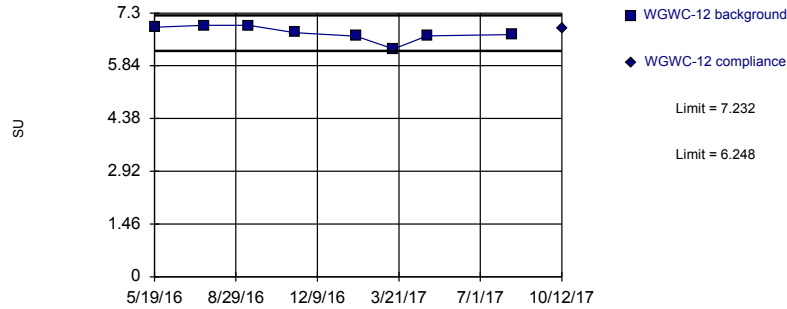
# Prediction Limit

Constituent: pH (SU) Analysis Run 1/30/2018 2:48 PM View: 3. IntraWell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWC-11	WGWC-11
5/19/2016	5.93	
7/20/2016	5.97	
9/14/2016	5.94	
11/11/2016	6.03	
1/27/2017	6.21	
3/15/2017	5.97	
4/26/2017	6.17	
8/10/2017	6.05	
10/12/2017		6.89

Within Limits

Prediction Limit  
Intrawell Parametric

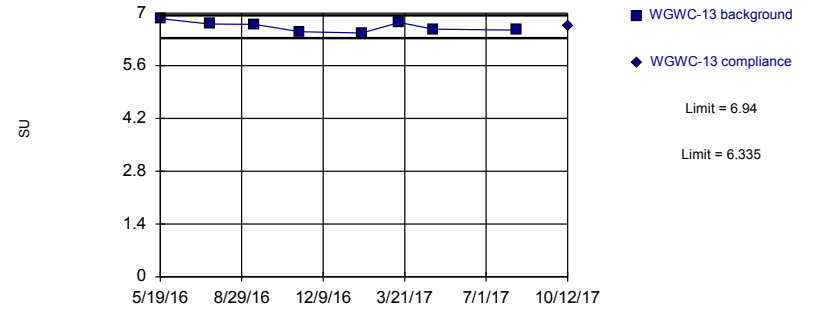


Background Data Summary: Mean=6.74, Std. Dev.=0.218, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8753, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: pH Analysis Run 1/30/2018 2:47 PM View: 3. Intrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Within Limits

Prediction Limit  
Intrawell Parametric

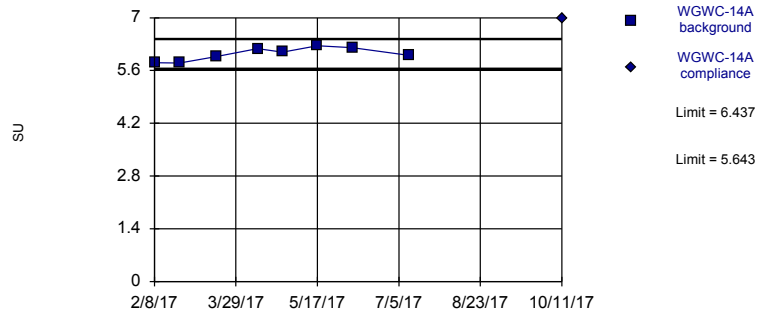


Background Data Summary: Mean=6.638, Std. Dev.=0.1342, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9395, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: pH Analysis Run 1/30/2018 2:47 PM View: 3. Intrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Exceeds Limits

Prediction Limit  
Intrawell Parametric

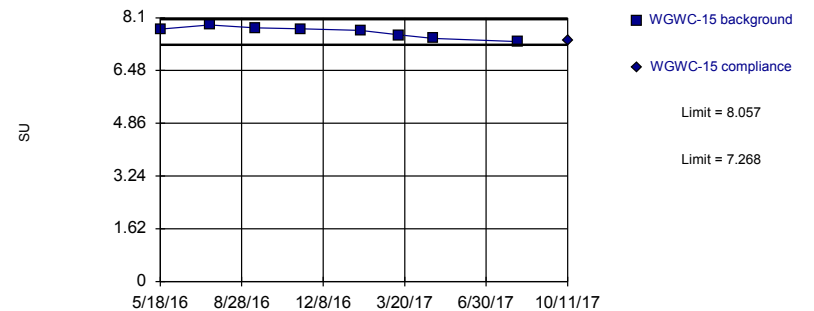


Background Data Summary: Mean=6.04, Std. Dev.=0.1758, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9217, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: pH Analysis Run 1/30/2018 2:47 PM View: 3. Intrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Within Limits

Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=7.663, Std. Dev.=0.1749, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9258, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: pH Analysis Run 1/30/2018 2:47 PM View: 3. Intrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

# Prediction Limit

Constituent: pH (SU) Analysis Run 1/30/2018 2:48 PM View: 3. IntraWell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWC-12	WGWC-12
5/19/2016	6.91	
7/20/2016	6.96	
9/14/2016	6.96	
11/11/2016	6.76	
1/27/2017	6.66	
3/15/2017	6.3	
4/26/2017	6.67	
8/10/2017	6.7	
10/12/2017		6.89

# Prediction Limit

Constituent: pH (SU) Analysis Run 1/30/2018 2:48 PM View: 3. IntraWell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWC-13	WGWC-13
5/19/2016	6.85	
7/20/2016	6.71	
9/14/2016	6.7	
11/10/2016	6.5	
1/27/2017	6.47	
3/15/2017	6.75	
4/26/2017	6.57	
8/9/2017	6.55	
10/12/2017		6.67

# Prediction Limit

Constituent: pH (SU) Analysis Run 1/30/2018 2:48 PM View: 3. IntraWell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWC-14A	WGWC-14A
2/8/2017	5.81	
2/23/2017	5.8	
3/17/2017	5.97	
4/11/2017	6.18	
4/26/2017	6.09	
5/17/2017	6.26	
6/7/2017	6.21	
7/11/2017	6	
10/11/2017		6.97

# Prediction Limit

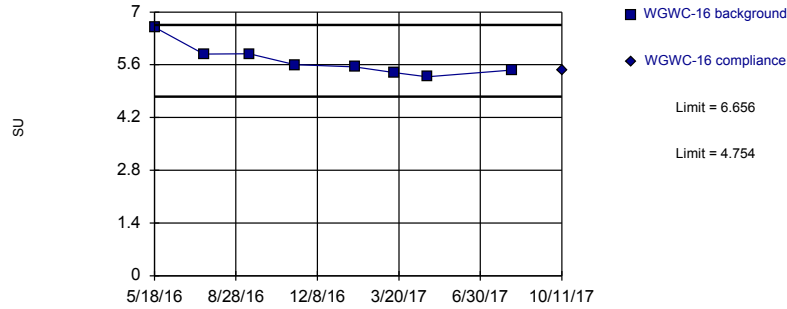
Constituent: pH (SU) Analysis Run 1/30/2018 2:48 PM View: 3. Inrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWC-15	WGWC-15
5/18/2016	7.75	
7/19/2016	7.88	
9/14/2016	7.79	
11/10/2016	7.76	
1/24/2017	7.71	
3/14/2017	7.57	
4/25/2017	7.47	
8/9/2017	7.37	
10/11/2017		7.42



Within Limits

Prediction Limit  
Intrawell Parametric

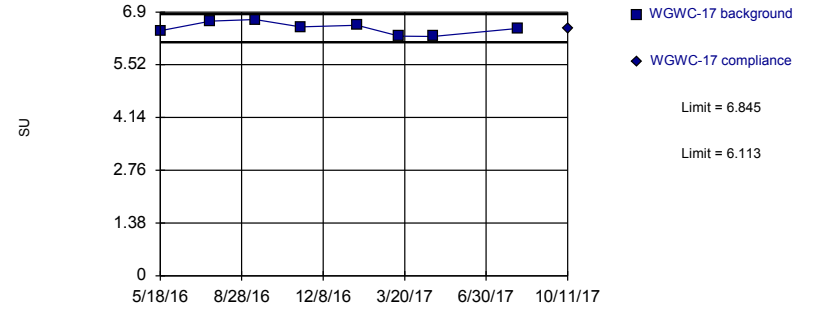


Background Data Summary: Mean=5.705, Std. Dev.=0.4216, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8588, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: pH Analysis Run 1/30/2018 2:47 PM View: 3. Intrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Within Limits

Prediction Limit  
Intrawell Parametric

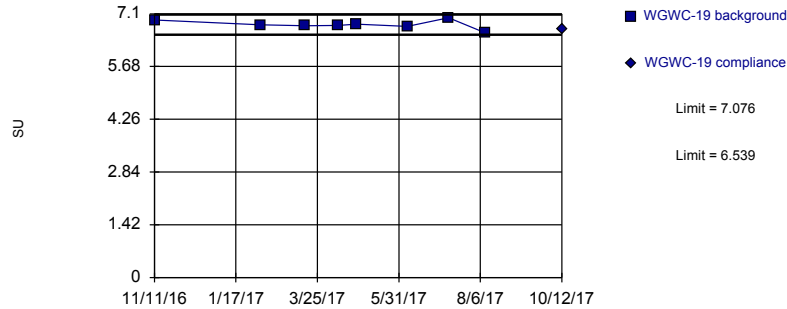


Background Data Summary: Mean=6.479, Std. Dev.=0.1622, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9416, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: pH Analysis Run 1/30/2018 2:47 PM View: 3. Intrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

Within Limits

Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=6.808, Std. Dev.=0.119, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9284, critical = 0.749. Kappa = 2.256 (c=7, w=11, 1 of 3, event alpha = 0.05132). Report alpha = 0.0006839.

Constituent: pH Analysis Run 1/30/2018 2:47 PM View: 3. Intrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

# Prediction Limit

Constituent: pH (SU) Analysis Run 1/30/2018 2:48 PM View: 3. IntraWell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWC-16	WGWC-16
5/18/2016	6.6	
7/19/2016	5.88	
9/14/2016	5.89	
11/10/2016	5.6	
1/24/2017	5.54	
3/15/2017	5.39	
4/25/2017	5.28	
8/9/2017	5.46	
10/11/2017		5.45

# Prediction Limit

Constituent: pH (SU) Analysis Run 1/30/2018 2:48 PM View: 3. Inrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWC-17	WGWC-17
5/18/2016	6.41	
7/20/2016	6.66	
9/14/2016	6.7	
11/10/2016	6.51	
1/20/2017	6.55	
3/14/2017	6.27	
4/25/2017	6.26	
8/9/2017	6.47	
10/11/2017		6.47

# Prediction Limit

Constituent: pH (SU) Analysis Run 1/30/2018 2:48 PM View: 3. Inrawell UPL - pH  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

	WGWC-19	WGWC-19
11/11/2016	6.93	
2/6/2017	6.8	
3/15/2017	6.78	
4/11/2017	6.79	
4/26/2017	6.82	
6/7/2017	6.76	
7/11/2017	6.99	
8/10/2017	6.59	
10/12/2017		6.7



# Summary Report

Constituent: Boron (mg/L)    Analysis Run 1/26/2018 5:36 PM    View: 4. Double Quantification - Boron  
 Plant Wansley    Client: Southern Company    Data: CCR Wansley Ash Pond 20180126

	WGWC-9	WGWC-10	WGWC-11	WGWC-12	WGWC-13	WGWC-14A	WGWC-15	WGWC-16	WGWC-17
5/17/2016									
5/18/2016		<0.05					<0.05	4.48	<0.05
5/19/2016	0.314		<0.05	<0.05	0.0252 (J)				
7/19/2016							<0.05	4.7	
7/20/2016	0.25	<0.05	<0.05	<0.05	<0.05				<0.05
9/13/2016									
9/14/2016	0.3	<0.05	<0.05	<0.05	<0.05		<0.05	5.8	<0.05
9/15/2016									
11/9/2016									
11/10/2016					<0.05		<0.05	6.7	<0.05
11/11/2016		<0.05	<0.05	<0.05					
11/14/2016									
1/17/2017									
1/18/2017									
1/19/2017									
1/20/2017									<0.05
1/24/2017							<0.05	6.3	
1/27/2017			0.021 (J)	0.047 (J)	0.033 (J)				
2/6/2017		<0.05							
2/8/2017						<0.05			
2/9/2017	0.61								
2/23/2017						<0.05			
3/13/2017									
3/14/2017							<0.05		<0.05
3/15/2017	0.42	0.032 (J)	0.058	0.024 (J)	<0.05			5.9	
3/17/2017						<0.05			
4/11/2017	0.37					<0.05			
4/24/2017									
4/25/2017							<0.05	6.2	<0.05
4/26/2017	0.38	<0.05	<0.05	<0.05	<0.05	<0.05			
5/17/2017						<0.05			
6/7/2017						<0.05			
7/11/2017						<0.05			
8/8/2017									
8/9/2017					<0.05		<0.05	6.3	<0.05
8/10/2017	0.29	<0.05	<0.05	<0.05					
8/25/2017									
10/10/2017									
10/11/2017						<0.05	<0.05	6.8	<0.05
10/12/2017	0.36	<0.05	<0.05	<0.05	<0.05				

# Summary Report

Constituent: Boron (mg/L) Analysis Run 1/26/2018 5:36 PM View: 4. Double Quantification - Boron  
Plant Wansley Client: Southern Company Data: CCR Wansley Ash Pond 20180126

WGWC-19

5/17/2016	
5/18/2016	
5/19/2016	
7/19/2016	
7/20/2016	
9/13/2016	
9/14/2016	
9/15/2016	
11/9/2016	
11/10/2016	
11/11/2016	<0.05
11/14/2016	
1/17/2017	
1/18/2017	
1/19/2017	
1/20/2017	
1/24/2017	
1/27/2017	
2/6/2017	<0.05
2/8/2017	
2/9/2017	
2/23/2017	
3/13/2017	
3/14/2017	
3/15/2017	0.034 (J)
3/17/2017	
4/11/2017	<0.05
4/24/2017	
4/25/2017	
4/26/2017	<0.05
5/17/2017	
6/7/2017	<0.05
7/11/2017	<0.05
8/8/2017	
8/9/2017	
8/10/2017	<0.05
8/25/2017	
10/10/2017	
10/11/2017	
10/12/2017	<0.05