

Prepared for:
Georgia Power Company

2017 Annual Groundwater Monitoring and Corrective Action Report

Plant McIntosh
Ash Pond 1 (AP-1)

January 31, 2018

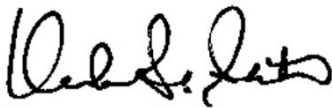
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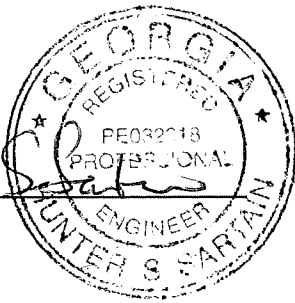
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CERTIFICATION STATEMENT

This 2017 *Annual Groundwater Monitoring and Corrective Action Report, Georgia Power Company - Plant McIntosh – Ash Pond 1 (AP-1)* 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:  

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 McIntosh (the site), Ash Pond 1 (AP-1) and satisfy 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 981 Old Augusta Central Road in Effingham County, Georgia, approximately 4 miles northeast of Rincon, and 20 miles north-northeast of the city of Savannah (Figure 1, Site Location Map). The plant property is on the west bank of the Savannah River at Big Kiffer Point. AP-1 is located on the eastern portion of the plant property (Figure 2, Site Plan and Well Location Map).

1.1.1 Regional Geology

Rincon, Georgia is located within the Coastal Plain Province of Georgia. Coastal Plain sediments are composed of stratified clay, silt, sand, and limestone, resting on much older igneous and metamorphic basement rocks. These older, crystalline rocks dip to the south and east causing the overlying sediments to form a wedge-shaped deposit, which is thickest to the east and the south. The Coastal Plain deposits crop out at the land surface in bands, from the oldest to the most recent, from the Fall Line to the coast. Pleistocene-aged deposits are at the surface in this region. Recharge to the major aquifers in the area is to the northeast of the site, where these formations outcrop.

1.1.2 Site Geology and Hydrogeology

The site is situated on sediments that were deposited from Cretaceous to Pleistocene and consist of stratified marine deposits and materials eroded from crystalline rock of the Piedmont Region. Boring logs describe soils at AP-1 as interbedded clays, silts, and sands typical of Coastal Plain sediments.

The uppermost aquifer at the site is the surficial aquifer, characterized by silty, sandy clays, clayey silts, silty sands, and fine to medium grained sands. Monitoring wells were screened in the surficial aquifer between approximately 29 and 1 feet (ft) above mean sea level (MSL).

1.2 GROUNDWATER MONITORING SYSTEM

Pursuant to §257.91, GPC installed a groundwater monitoring system within the uppermost aquifer at AP-1. The monitoring system is designed to monitor groundwater passing the waste boundary of AP-1 within the uppermost aquifer. Wells were located 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 describes 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-1.

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).

Eight (8) monitoring wells (MGWC-1, MGWC-2, MGWC-3, MGWA-5, MGWA-6, MGWC-7, MGWC-8, and MGWA-10) and two (2) piezometers (MGWC-4 and MGWA-9) were installed in November 2015. Two (2) additional monitoring wells (MGWA-11 and MGWC-12) and two (2) piezometers (PZ-13 and PZ-14) were installed in May 2016 and June 2016, respectively. Monitoring well and piezometer locations are shown on Figure 2.

The number, spacing, and depths of the groundwater monitoring wells were 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 9th 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 McIntosh Ash Pond 1 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-1.

3.1 GROUNDWATER ELEVATION MEASUREMENT

Prior to each sampling event, groundwater elevations were recorded from piezometers and each well in the network at AP-1. Groundwater elevations recorded during the background and detection monitoring events are summarized in Table 3, Summary of Historical Groundwater Elevations. Groundwater elevation data was used to develop a potentiometric surface elevation contour map (Figure 3, Potentiometric Surface Contour Map – October 2017). The general direction of groundwater flow across the site is toward the 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-1 was calculated using a derivation of Darcy's Law. Specifically,

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

Where:

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

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

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

n_e = Effective porosity

Hydraulic conductivity measurements were calculated from slug test data collected in a subset of AP-1 wells. Hydraulic conductivity values ranged from 0.13 to 1.80 feet/day (ft/day). The average hydraulic conductivity used in the flow velocity calculations is 0.47 ft/day, which is within the standard range of hydraulic conductivity values for a silty sand. The hydraulic gradient was calculated between MGWA-10 and MGWC-3, and MGWA-6 and MGWC-1. An estimated effective porosity of 0.30 is used for the flow rate calculations for wells screened in silty sand soils, based on review of several resources (Driscoll, 1986; USEPA, 1989; Freeze and Cherry, 1979). Groundwater flow velocities were calculated and are tabulated on Table 4, Groundwater Flow Velocity Calculations – October 2017. The average groundwater flow velocity at AP-1 was calculated as 0.014 ft/day, 5.11 ft/year.

3.3 GROUNDWATER SAMPLING

Groundwater samples were collected in accordance with §257.93(a). Purging and sampling was performed using a peristaltic pump with the intake tubing lowered to the midpoint of the well screen (or as appropriate 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
- $\pm 5\%$ 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, unfiltered samples were collected, placed in ice-packed coolers, and submitted to the analytical laboratory following chain-of-custody protocol.

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 GPC Environmental Laboratory (GPCEL) in Smyrna, Georgia or Test America, Inc. (TAL), of Pensacola, Florida and St. Louis Missouri. Laboratory analysis was also performed by Pace Analytical Services, LLC (Pace), of Peachtree Corners, Georgia, and Greensberg, Pennsylvania. Pace, GPCEL, and TAL are accredited by National Environmental Laboratory Accreditation Program (NELAP) and maintain a NELAP certification for all parameters analyzed. In addition, GPCEL TAL, and Pace 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 (as described below) 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 (RPDs), 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-1.

4.1 STATISTICAL METHOD

The statistical test used to evaluate the groundwater monitoring data was both the interwell (boron, chloride, fluoride and sulfate) and intrawell (calcium, pH and total dissolved solids [TDS]) prediction limit (PL) method combined with the option of a 1-of-2 resampling strategy. 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. If the resample exceeds the PL, the initial exceedance is verified and a statistically significant increase (SSI) is

determined. When the resample result does not verify the initial result, 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, 2009).
- 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 PL.
- Nonparametric PLs 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-1 was statistically analyzed in accordance with the PE - certified statistical method. Resampling to confirm SSIs was not performed; therefore, initial SSIs are treated as verified. The statistical analysis and comparison to PLs are included as Appendix B.

Based on the statistical results presented in Appendix B, the following summarizes parameters exhibiting SSIs at each monitoring well:

- Boron: MGWC-1, MGWC-2, MGWC-3, MGWC-7, and MGWC-8
- Calcium: MGWC-8
- Chloride: MGWC-1, MGWC-2, MGWC-3, MGWC-7, and MGWC-8
- Fluoride: MGWC-7 and MGWC-12
- Sulfate: MGWC-1, MGWC-2, MGWC-3, MGWC-7, and MGWC-8
- TDS: MGWC-8
- pH: MGWC-2

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-1 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-1. Therefore, statistical analysis of the Appendix IV data has not been performed.

5.0 MONITORING PROGRAM STATUS

AP-1 is in detection monitoring. SSIs of Appendix III parameters have been identified. Pursuant to §257.94(e)(1), GPC has 90 days from the date of determination to either (1) prepare a demonstration that a source other than the CCR Unit 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 AP-1 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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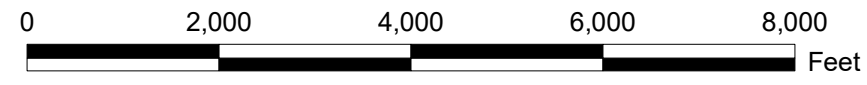
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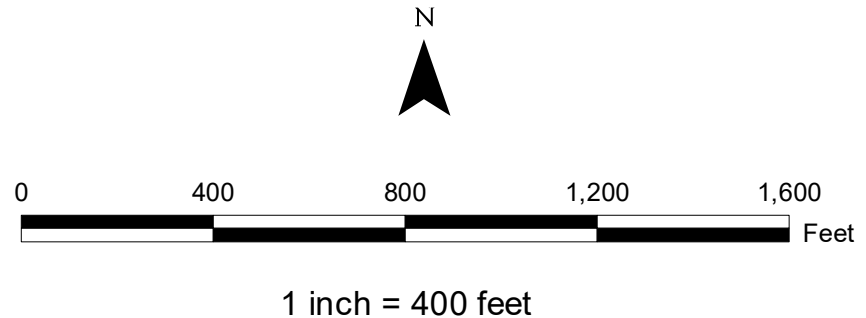



1 inch = 2,000 feet

 Environmental Resources Management FOR Georgia Power Company		FIGURE 1 SITE LOCATION MAP PLANT MCINTOSH ASH POND 1 RINCON, EFFINGHAM COUNTY, GEORGIA			
					SCALE
As Shown		GWRpt_F1_McIntshALLUnitSiteLoc	1	As Shown	0



Legend	
	Monitoring Well
	Piezometer



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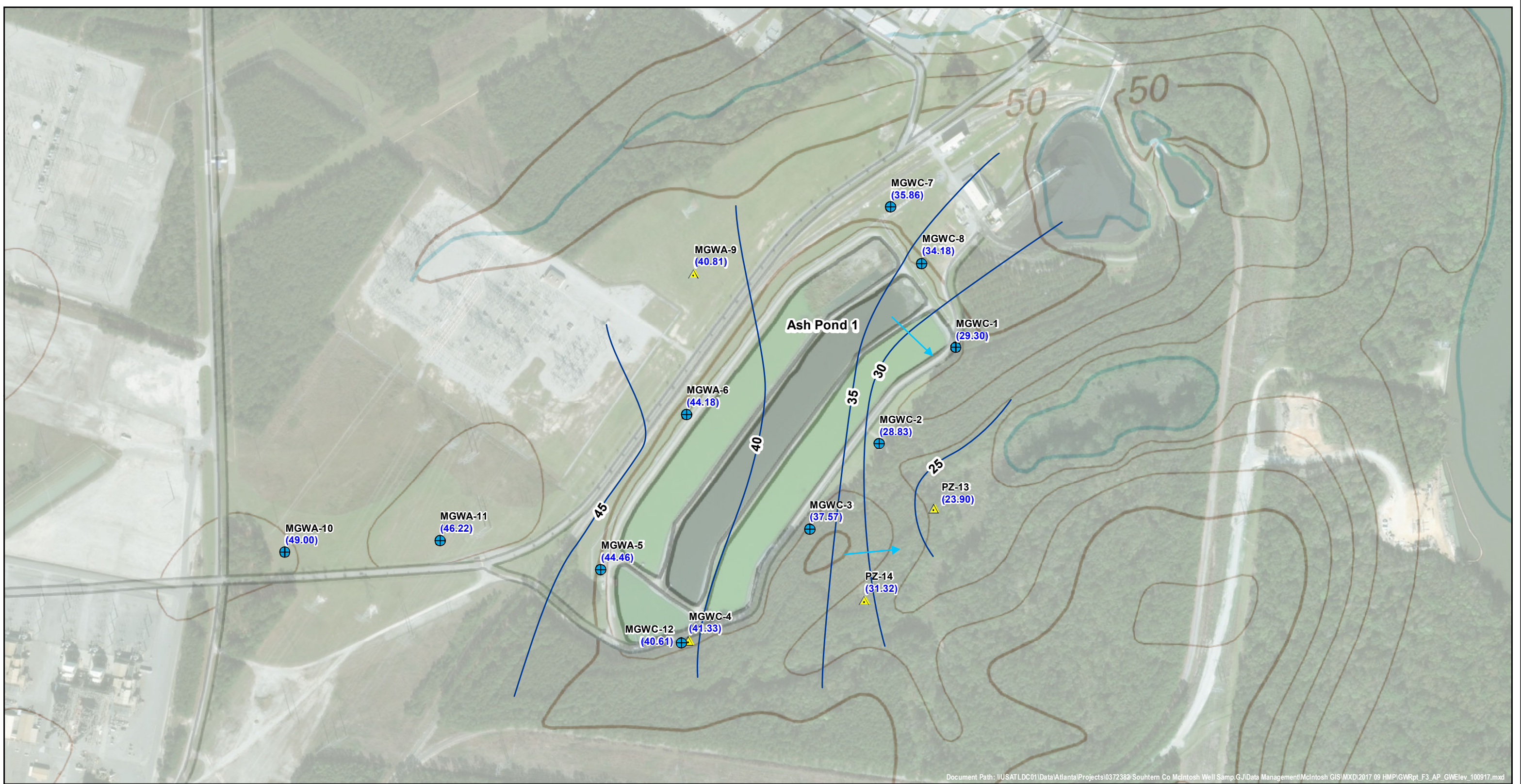
FOR

Georgia Power Company

SCALE	DRAWING NUMBER	SHEET	CONT'D	REV
As Shown	GWRpt_F2_AP_GWElev_100917	2	As Shown	0

FIGURE 2
 SITE PLAN AND WELL LOCATION MAP

PLANT MCINTOSH ASH POND 1
 RINCON, EFFINGHAM COUNTY, GEORGIA



Document Path: \\USATLDC01\Data\Atlanta\Projects\0372382 Southern Co McIntosh Well Samp.GJ\Data Management\McIntosh GIS\MXD\2017 09 HMP\GWRpt_F3_AP_GWElev_100917.mxd

Legend

- Monitoring Well
- Piezometer
- Apparent Ground Water Flow Direction
- Apparent Potentiometric Surface Contour

(49.00) = Groundwater Elevation
(10/09/17, Feet Above Mean Sea Level, Ft MSL)

N

0 400 800 1,200 1,600
Feet

1 inch = 400 feet

**Environmental Resources
Management**

FOR

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SCALE	DRAWING NUMBER	SHEET	CONT'D	REV
As Shown	GWRpt_F3_AP_GWElev_100917	2	As Shown	0

FIGURE 3
 POTENTIOMETRIC SURFACE CONTOUR MAP -
 OCTOBER 2017
 PLANT MCINTOSH ASH POND 1
 RINCON, EFFINGHAM COUNTY, GEORGIA

TABLE 1. MONITORING WELL NETWORK SUMMARY

Well ID	Hydraulic Location	Installation Date mm/dd/yyyy	Northing	Easting	Top of Casing Elevation (ft MSL)	Total Depth (ft BTOC)	Top of Screen Elevation (ft MSL)	Bottom of Screen Elevation (ft MSL)	Screen Length (ft)
MGWC-1	Downgradient	11/10/2015	856813.32	964287.17	65.08	55.78	19.30	9.30	10
MGWC-2	Downgradient	11/11/2015	856400.7	963958.28	48.26	37.06	21.20	11.20	10
MGWC-3	Downgradient	11/11/2015	856033.91	963658.13	52.34	38.44	23.90	13.90	10
MGWA-5	Upgradient	11/12/2015	855860.77	962763.08	64.09	62.79	11.30	1.30	10
MGWA-6	Upgradient	11/12/2015	856527.64	963130.05	60.83	41.63	29.20	19.20	10
MGWC-7	Downgradient	11/13/2015	857417.67	964007.37	54.19	41.99	22.20	12.20	10
MGWC-8	Downgradient	11/10/2015	857177.15	964141.60	62.36	52.26	20.10	10.10	10
MGWA-10	Upgradient	11/17/2015	855934.18	961406.35	64.69	52.79	21.90	11.90	10
MGWA-11	Upgradient	05/27/2016	855985.27	962070.17	67.51	55.61	21.90	11.90	10
MGWC-12	Downgradient	05/26/2016	855545.62	963110.1	66.80	52.70	24.10	14.10	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

TABLE 2. GROUNDWATER SAMPLING EVENT SUMMARY

Well ID	Hydraulic Location	Summary of Sampling Events										Status of Monitoring Well
		May 5-6, 2016	June 20-21, 2016	August 8-16, 2016	September 26-29, 2016	November 14-16, 2016	January 10-19, 2017	February 27-March 2, 2017	April 17-25, 2017	July 13, 2017	October 9-10, 2017	
Purpose of Sampling Event		Background	Background	Background	Background	Background	Background	Background	Background	Background	Detection	
MGWC-1	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	-	D01	Detection
MGWC-2	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	-	D01	Detection
MGWC-3	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	-	D01	Detection
MGWA-5	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	-	D01	Detection
MGWA-6	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	-	D01	Detection
MGWC-7	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	-	D01	Detection
MGWC-8	Downgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	-	D01	Detection
MGWA-10	Upgradient	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	-	D01	Detection
MGWA-11	Upgradient	--	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection
MGMC-12	Downgradient	--	BG01	BG02	BG03	BG04	BG05	BG06	BG07	BG08	D01	Detection

Notes:

BGXX = Background Event and Number

DXX = Detection Event Number

-- = Not sampled

TABLE 3. SUMMARY OF HISTORICAL GROUNDWATER ELEVATIONS

Well ID	Top of Casing Elevation (ft MSL)	Groundwater Elevations (ft MSL)									
		5/4/2016	6/13/2016	8/8/2016	9/26/2016	11/14/2016	1/10/2017	2/27/2017	4/17/2017	7/17/2017	10/9/2017
MGWC-1	65.08	29.19	29.57	28.87	28.61	28.93	28.57	28.88	28.68	28.84	29.30
MGWC-2	48.26	28.84	29.25	28.41	28.36	28.63	28.57	28.76	28.60	28.77	28.83
MGWC-3	52.34	37.32	38.13	36.88	36.49	36.86	36.50	37.08	36.94	37.61	37.57
MGWA-5	64.09	43.82	44.92	43.09	42.30	43.11	43.07	43.87	43.51	44.67	44.46
MGWA-6	60.83	44.21	45.68	43.37	42.58	43.02	42.92	43.68	43.54	44.83	44.18
MGWC-7	54.19	36.25	37.59	35.30	34.70	35.11	34.85	35.32	35.20	35.91	35.86
MGWC-8	62.36	34.29	34.78	34.03	33.62	32.84	33.35	33.62	33.52	33.85	34.18
MGWA-10	64.69	48.53	49.69	47.42	43.81	47.69	48.20	48.90	48.37	49.56	49.00
MGWA-11	64.66	NM	46.89	44.73	46.37	44.83	45.08	45.86	45.42	46.64	46.22
MGMC-12	63.92	NM	41.32	40.01	39.43	40.20	39.99	40.71	40.41	40.33	40.61
MGWC-4	64.05	40.18	41.06	39.78	39.18	39.94	39.76	40.49	40.14	41.08	41.33
MGWA-9	59.05	40.58	42.76	39.45	38.90	39.57	39.68	40.62	40.12	41.53	40.81
PZ-13	40.66	NM	24.06	23.41	23.53	23.74	23.96	24.09	23.87	23.82	23.90
PZ-14	46.90	NM	31.15	30.37	30.16	28.52	30.54	30.96	30.80	31.16	31.32

Notes:

ft = feet NM = not measured

MSL = mean sea level

TABLE 4. GROUNDWATER FLOW VELOCITY CALCULATIONS - OCTOBER 2017

Well ID		h_1	h_2	K (ft/day)	n_e	dh	L (ft)	i (ft/ft)	Velocity (ft/day)
MGWA-10	MGWC-3	49.00	37.57	0.47	0.30	11.43	2,286	0.005	0.008
MGWA-6	MGWC-1	44.18	29.30			14.88	1,200	0.012	0.019
									Avg. (ft/day)
									0.014

Notes:

K = hydraulic conductivity

i = hydraulic gradient

 n_e = effective porositydh = 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 McINTOSH ASH POND 1
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		MGWA-5	MGWA-5	MGWA-5	MGWA-5	MGWA-5	MGWA-5	MGWA-5	MGWA-5	
		05/05/2016	06/20/2016	08/15/2016	09/28/2016	11/16/2016	01/17/2017	03/02/2017	04/18/2017	
APPENDIX III	Boron	N/R	ND	ND (0.013 J)	ND (0.023 J)	ND	ND	ND	ND	ND
	Calcium	N/R	27	29.4	26	31	26	29	28	27
	Chloride	(250)	6.51	5.9	6.4	6.1	6.1	5.7	5.3	5.3
	Fluoride	4	ND (0.132 J)	ND (0.05 J)	ND (0.10 J)	ND (0.11 J)	ND (0.093 J)	ND (0.095 J)	ND (0.16 J)	ND
	Sulfate	(250)	4.47	7.7	7.5	7.8	6.7	6.7	5.6	5.1
	TDS	(500)	129	156	160	91	250	140	170	140
APPENDIX IV	Antimony	0.006	ND (0.0012 J)	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND (0.00014 J)	ND	ND (0.00062 J)	ND	ND	ND	ND
	Barium	2	0.0295	0.031	0.032	0.038	0.035	0.039	0.037	0.035
	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 (0.00024 J)	ND	ND	ND	ND	0.0032	ND
	Cobalt	N/R	ND	ND (0.000012 J)	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.0065 J)	0.0059	0.0075	0.0094	0.010	0.0076	0.0080
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND (0.0026 J)	ND (0.0014 J)	ND (0.0013 J)	ND (0.0012 J)	ND	ND	ND	ND
	Radium	5	0.480	0.184 U	0.577	0.107 U	0.333 U	0.511 U	0.105 U	0.279 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 McINTOSH ASH POND 1
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		MGWA-6	MGWA-6	MGWA-6	MGWA-6	MGWA-6	MGWA-6	MGWA-6	MGWA-6	
		05/05/2016	06/21/2016	08/15/2016	09/28/2016	11/16/2016	01/17/2017	03/02/2017	04/18/2017	
APPENDIX III	Boron	N/R	0.157	0.124	0.18	0.17	0.17	0.17	0.14	0.14
	Calcium	N/R	105	91.2	94	110	98	100	100	110
	Chloride	(250)	9.67	9.2	10	10	10	9.4	8.6	8.9
	Fluoride	4	ND (0.091 J)	ND (0.08 J)	ND	ND (0.084 J)	ND (0.084 J)	ND (0.099 J)	ND (0.15 J)	ND
	Sulfate	(250)	17.8	17	20	21	20	19	15	14
	TDS	(500)	281	303	310	170	340	310	330	290
APPENDIX IV	Antimony	0.006	ND	ND (0.0017 J)	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	0.0343	0.0352	0.035	0.033	0.020	0.022	0.021	0.018
	Barium	2	0.0595	0.0539	0.053	0.060	0.052	0.051	0.043	0.042
	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	0.0032	ND
	Cobalt	N/R	ND	ND (0.0003 J)	ND (0.00049 J)	ND (0.00043 J)	ND	ND	ND (0.00046 J)	ND (0.00044 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	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.694	0.511 U	0.467	0.926	0.863	0.820	0.236 U	0.316 U
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND (0.0001 J)	ND	ND	ND	ND	ND	ND	

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 McINTOSH ASH POND 1
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		MGWA-10	MGWA-10	MGWA-10	MGWA-10	MGWA-10	MGWA-10	MGWA-10	MGWA-10	
		05/05/2016	06/20/2016	08/15/2016	09/28/2016	11/16/2016	01/16/2017	03/02/2017	04/18/2017	
APPENDIX III	Boron	N/R	ND	ND (0.011 J)	ND (0.022 J)	ND (0.023 J)	ND	ND (0.021 J)	ND	ND
	Calcium	N/R	8.83	8.1	6.1	7.2	5.2	3.8	5.4	5.0
	Chloride	(250)	7.35	7	7.5	7.0	7.5	7.7	6.9	6.8
	Fluoride	4	ND (0.046 J)	ND	ND	ND	ND	ND	ND (0.12 J)	ND
	Sulfate	(250)	2.46	2.5	1.9	1.9	1.7	ND	1.4	1.3
	TDS	(500)	78	80	58	29	140	36	78	16
APPENDIX IV	Antimony	0.006	ND (0.00112 J)	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND (0.00036 J)	ND (0.00096 J)	ND (0.00095 J)	ND	ND	ND	ND
	Barium	2	0.0376	0.033	0.029	0.032	0.027	0.022	0.027	0.024
	Beryllium	0.004	ND	ND (0.000033 J)	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND (0.00249 J)	ND (0.0026 J)	0.0029	0.0027	0.0026	0.0029	0.0063	0.0031
	Cobalt	N/R	ND	ND (0.00018 J)	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.0071 J)	0.0065	0.0075	0.0081	0.0076	0.0073	0.0060
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND	ND (0.00031 J)	ND	ND	ND	ND	ND	ND
	Radium	5	0.879	0.305 U	0.577	0.770	0.427 U	1.10	1.01	0.635
	Selenium	0.05	ND	ND	ND (0.00062 J)	ND (0.00030 J)	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 McINTOSH ASH POND 1
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		MGWA-11	MGWA-11	MGWA-11	MGWA-11	MGWA-11	MGWA-11	MGWA-11	MGWA-11	
		06/20/2016	08/15/2016	09/28/2016	11/16/2016	01/17/2017	03/02/2017	04/18/2017	07/13/2017	
APPENDIX III	Boron	N/R	ND (0.017 J)	ND (0.032 J)	ND (0.021 J)	ND	ND	ND	ND	ND
	Calcium	N/R	35.5	34	38	33	34	35	33	30
	Chloride	(250)	4.3	4.1	3.9	4.1	3.9	3.5	3.7	4.2
	Fluoride	4	ND (0.06 J)	ND (0.10 J)	ND (0.097 J)	ND (0.12 J)	ND (0.11 J)	ND (0.18 J)	ND (0.11 J)	ND (0.12 J)
	Sulfate	(250)	1	ND (0.73 J)	ND	ND	ND	ND	ND	1.4
	TDS	(500)	188	180	100	270	170	210	160	150
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.003 J)	0.0033	0.0026	0.0013	ND	0.0015	ND (0.00071 J)	ND (0.00066 J)
	Barium	2	0.091	0.11	0.12	0.11	0.11	0.11	0.10	0.087
	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 (0.00066 J)	ND	ND	ND	ND	0.0030	ND	ND
	Cobalt	N/R	ND (0.000039 J)	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND (0.000087 J)	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.014 J)	0.020	0.019	0.021	0.020	0.019	0.016	0.011
	Mercury	0.002	ND	ND (0.000080 J)	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND (0.0052 J)	ND (0.0022 J)	ND (0.0018 J)	ND	ND (0.0011 J)	ND	ND	ND
	Radium	5	0.556 U	0.720	0.521 U	0.322 U	1.26	0.470	0.233 U	0.679
	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 McINTOSH ASH POND 1
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		MGWC-1	MGWC-1	MGWC-1	MGWC-1	MGWC-1	MGWC-1	MGWC-1	MGWC-1	
		05/06/2016	06/21/2016	08/16/2016	09/28/2016	11/16/2016	01/19/2017	03/02/2017	04/18/2017	
APPENDIX III	Boron	N/R	0.567	1.55	0.85	0.70	0.88	1.5	0.89	1.1
	Calcium	N/R	92.5	119	84	92	83	110	89	100
	Chloride	(250)	13.2	15	14	14	14	14	13	13
	Fluoride	4	ND (0.28 J)	0.36	0.27	0.26	0.24	0.22	0.27	0.20
	Sulfate	(250)	106	210	120	110	130	160	130	120
	TDS	(500)	282	516	360	190	410	400	360	360
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.00299 J)	ND (0.0047 J)	0.0030	0.0036	0.0030	0.0024	0.0027	0.0024
	Barium	2	0.11	0.165	0.094	0.10	0.096	0.12	0.097	0.092
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	ND (0.000126 J)	ND (0.0005 J)	ND	ND	ND	ND	ND	ND
	Chromium	0.1	ND	ND	ND	ND	ND	ND	0.0036	ND
	Cobalt	N/R	ND	ND (0.0012 J)	ND (0.00047 J)	ND (0.00058 J)	ND	ND (0.00040 J)	ND	ND
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.0128 J)	ND (0.0102 J)	0.012	0.012	0.013	0.011	0.013	0.0097
	Mercury	0.002	ND	ND	ND	ND	ND	ND	ND	ND
	Molybdenum	N/R	ND (0.0021 J)	ND (0.002 J)	ND (0.0019 J)	ND (0.0018 J)	ND	ND (0.0011 J)	ND (0.0012 J)	ND (0.0013 J)
	Radium	5	1.07	2.01	1.12	1.09	1.58	1.64	1.08	1.23
	Selenium	0.05	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002	ND	ND (0.00009 J)	ND	ND	ND	ND	ND	ND (0.000095 J)	

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 McINTOSH ASH POND 1
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		MGWC-2	MGWC-2	MGWC-2	MGWC-2	MGWC-2	MGWC-2	MGWC-2	MGWC-2	
		05/06/2016	06/21/2016	08/16/2016	09/29/2016	11/16/2016	01/18/2017	03/02/2017	04/19/2017	
APPENDIX III	Boron	N/R	3.78	3.1	2.8	3.1	3.9	3.7	3.3	3.7
	Calcium	N/R	131	119	120	140	120	130	120	120
	Chloride	(250)	41	20	20	19	20	18	18	17
	Fluoride	4	ND (0.088 J)	ND (0.19 J)	ND (0.087 J)	ND	ND	ND	ND (0.15 J)	ND
	Sulfate	(250)	445	290	270	280	280	280	240	250
	TDS	(500)	661	692	650	640	680	630	660	600
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND (0.00068 J)	ND	ND (0.00065 J)	ND
	Barium	2	0.0605	0.0613	0.052	0.053	0.056	0.060	0.056	0.051
	Beryllium	0.004	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	0.005	0.00166	ND (0.0008 J)	0.0034	0.0027	ND (0.0022 J)	0.0080	0.0050	ND (0.0011 J)
	Chromium	0.1	ND	ND	ND	ND	ND	ND	0.0033	ND
	Cobalt	N/R	ND (0.00311 J)	ND (0.0031 J)	0.0034	0.0032	0.0032	0.0032	0.0042	0.0035
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND	ND (0.0047 J)	ND (0.0043 J)	ND (0.0048 J)	0.0058	0.0051	0.0061	ND (0.0042 J)
	Mercury	0.002	ND	ND	ND (0.000078 J)	ND	ND (0.00010 J)	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.633	1.19 U	0.516	0.665	0.694	0.688	0.484	0.599
	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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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 McINTOSH ASH POND 1
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		MGWC-3	MGWC-3	MGWC-3	MGWC-3	MGWC-3	MGWC-3	MGWC-3	MGWC-3	
		05/06/2016	06/21/2016	08/16/2016	09/29/2016	11/16/2016	01/17/2017	03/02/2017	04/18/2017	
APPENDIX III	Boron	N/R	0.926	0.792	1.0	1.0	1.2	1.3	1.3	1.8
	Calcium	N/R	109	99.7	97	100	94	100	99	120
	Chloride	(250)	12.5	13	13	13	14	14	13	13
	Fluoride	4	ND (0.086 J)	ND (0.23 J)	ND	ND (0.082 J)	ND (0.087 J)	ND (0.086 J)	ND (0.15 J)	ND
	Sulfate	(250)	94.2	95	88	94	97	100	100	91
	TDS	(500)	380	392	360	380	420	380	410	360
APPENDIX IV	Antimony	0.006	ND	ND (0.0003 J)	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.00154 J)	ND (0.0016 J)	0.0017	0.0013	0.0014	ND (0.00056 J)	0.0018	0.0018
	Barium	2	0.151	0.174	0.13	0.14	0.14	0.16	0.15	0.14
	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	0.0030	ND
	Cobalt	N/R	ND	ND (0.0006 J)	ND (0.00064 J)	ND (0.00054 J)	ND (0.00041 J)	ND (0.00051 J)	ND (0.00064 J)	ND (0.00057 J)
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.0113 J)	ND (0.0103 J)	0.010	0.010	0.014	0.014	0.013	0.010
	Mercury	0.002	ND	ND	ND	ND	ND (0.000070 J)	ND	ND	ND
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	5	1.41	1.71	1.75	1.43	1.90	1.90	1.37	1.42
	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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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 McINTOSH ASH POND 1
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		MGWC-7	MGWC-7	MGWC-7	MGWC-7	MGWC-7	MGWC-7	MGWC-7	MGWC-7	
		05/05/2016	06/21/2016	08/15/2016	09/28/2016	11/16/2016	01/17/2017	03/02/2017	04/18/2017	
APPENDIX III	Boron	N/R	0.855	1.15	1.3	1.3	1.3	1.3	1.3	1.5
	Calcium	N/R	45	52.8	50	58	50	52	52	56
	Chloride	(250)	13	13	14	13	13	13	13	12
	Fluoride	4	0.394	0.49	0.44	0.40	0.36	0.20	0.36	0.29
	Sulfate	(250)	116	170	170	170	170	180	180	160
	TDS	(500)	272	356	330	180	330	310	340	300
APPENDIX IV	Antimony	0.006	ND (0.00197 J)	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.00143 J)	ND (0.0009 J)	ND (0.0012 J)	ND (0.00084 J)	ND	ND	ND (0.00090 J)	ND (0.00050 J)
	Barium	2	0.039	0.0152	0.015	0.014	0.013	0.014	0.013	0.011
	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	0.0034	ND
	Cobalt	N/R	ND (0.0036 J)	ND (0.0097 J)	0.0098	0.0095	0.0094	0.0099	0.013	0.0086
	Lead	0.015	ND	ND (0.0003 J)	ND	ND	ND	ND	ND	ND
	Lithium	N/R	0.0586	0.122	0.12	0.12	0.13	0.14	0.13	0.11
	Mercury	0.002	ND	ND	ND	ND	ND (0.000080 J)	ND	ND	ND
	Molybdenum	N/R	ND (0.00351 J)	ND	ND	ND	ND	ND	ND	ND
	Radium	5	0.750	1.01 U	1.30	1.06	0.855	1.59	1.40	0.684
	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 McINTOSH ASH POND 1
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		MGWC-8	MGWC-8	MGWC-8	MGWC-8	MGWC-8	MGWC-8	MGWC-8	MGWC-8	
		05/05/2016	06/21/2016	08/15/2016	09/28/2016	11/16/2016	01/17/2017	03/02/2017	04/18/2017	
APPENDIX III	Boron	N/R	0.976	0.862	0.80	0.80	0.98	1.6	1.8	2.4
	Calcium	N/R	41.2	44.7	27	32	27	32	33	59
	Chloride	(250)	10.1	10	9.5	9.2	9.5	10	9.3	10
	Fluoride	4	ND (0.103 J)	ND (0.1 J)	ND (0.11 J)	ND (0.10 J)	ND (0.091 J)	ND	ND (0.16 J)	ND
	Sulfate	(250)	144	160	120	130	130	150	160	180
	TDS	(500)	287	297	230	130	290	240	270	310
APPENDIX IV	Antimony	0.006	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND	ND	ND	ND	ND	ND	ND	ND (0.00059 J)
	Barium	2	0.0364	0.0386	0.030	0.034	0.034	0.038	0.037	0.040
	Beryllium	0.004	ND	ND (0.0004 J)	ND (0.00053 J)	ND (0.00049 J)	ND (0.00040 J)	ND (0.00084 J)	ND (0.00068 J)	ND (0.00067 J)
	Cadmium	0.005	ND (0.000784 J)	ND (0.0003 J)	ND	ND	ND	ND	ND	ND (0.00044 J)
	Chromium	0.1	ND	ND	ND	ND	ND	ND	0.0031	ND
	Cobalt	N/R	ND (0.00359 J)	ND (0.0033 J)	0.0038	0.0043	0.0040	0.0051	0.0064	0.0050
	Lead	0.015	ND	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.0252 J)	ND (0.0228 J)	0.026	0.026	0.031	0.032	0.031	0.023
	Mercury	0.002	ND	ND	ND (0.00015 J)	ND	0.00021	ND (0.000076 J)	ND	ND (0.00018 J)
	Molybdenum	N/R	ND	ND	ND	ND	ND	ND	ND	ND (0.0037 J)
	Radium	5	1.21	0.895 U	1.64	2.17	1.49	1.75	1.03	1.83
	Selenium	0.05	ND	ND	ND (0.00033 J)	ND (0.00038 J)	ND	ND	ND	0.0024
Thallium	0.002	ND	ND (0.0001 J)	ND (0.00016 J)	ND (0.00014 J)	ND (0.000090 J)	ND (0.00016 J)	ND (0.00018 J)	ND (0.00019 J)	

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 McINTOSH ASH POND 1
ANALYTICAL DATA SUMMARY**

Substance	MCL/ (SMCL)	Well ID								
		MGWC-12	MGWC-12	MGWC-12	MGWC-12	MGWC-12	MGWC-12	MGWC-12	MGWC-12	
		06/21/2016	08/16/2016	09/29/2016	11/16/2016	01/18/2017	03/02/2017	04/25/2017	07/13/2017	
APPENDIX III	Boron	N/R	ND (0.0201 J)	0.055	ND	0.055	0.097	0.064	ND	ND
	Calcium	N/R	25.5	25	30	26	32	26	26	26
	Chloride	(250)	4.4	4.6	4.4	4.5	4.2	3.9	4.0	4.0
	Fluoride	4	ND (0.14 J)	0.29	0.26	0.25	0.26	0.28	0.25	0.21
	Sulfate	(250)	4	2.8	ND	3.0	4.1	4.6	4.4	4.8
	TDS	(500)	177	160	190	240	180	170	170	150
APPENDIX IV	Antimony	0.006	ND (0.0004 J)	ND	ND	ND	ND	ND	ND	ND
	Arsenic	0.01	ND (0.0015 J)	ND (0.00082 J)	0.0019	0.0017	ND (0.00096 J)	ND (0.00082 J)	ND	ND (0.00047 J)
	Barium	2	0.0439	0.041	0.052	0.044	0.056	0.040	0.042	0.043
	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	0.0032	ND	ND
	Cobalt	N/R	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	0.015	ND (0.0001 J)	ND	ND	ND	ND	ND	ND	ND
	Lithium	N/R	ND (0.0112 J)	0.014	0.017	0.016	0.015	0.015	0.013	0.014
	Mercury	0.002	ND	ND	ND	ND (0.000086 J)	ND	ND	ND	ND
	Molybdenum	N/R	ND (0.002 J)	ND (0.0012 J)	ND (0.0014 J)	ND	ND	ND	ND	ND
	Radium	5	0.292 U	0.232 U	1.11	0.798	0.302 U	0.437	0.391	0.470
	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.

Appendix A
Analytical Data Reports

May 27, 2016

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

RE: Workorder: 103222 CCR - McIntosh 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:

Maria Padilla

mrpadill@southernco.com

(404) 799-2188 / 8-530-2188

Respectfully submitted,



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

Report ID: 103222 - 5031417
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SAMPLE SUMMARY

Workorder: 103222 CCR - McIntosh AP

Lab ID	Sample ID	Analysis Request Number	Matrix	Date Collected	Date Received
103222001	MGWA-9	N/A	Water	5/5/2016 12:44	5/6/2016 10:25
103222002	MGWA-5	N/A	Water	5/5/2016 15:50	5/6/2016 10:25
103222003	MGWC-8	N/A	Water	5/5/2016 17:22	5/6/2016 10:25
103222004	MGWA-10	N/A	Water	5/5/2016 13:30	5/6/2016 10:25
103222005	MGWA-6	N/A	Water	5/5/2016 17:30	5/6/2016 10:25
103222006	Dup-01	N/A	Water	5/5/2016 13:30	5/6/2016 10:25

Report ID: 103222 - 5031417
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CASE NARRATIVE

Workorder: 103222 CCR - McIntosh AP

Analyses for sample 103222001 (MGWA-9) were canceled per customer's request.

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ANALYTICAL RESULTS

Workorder: 103222 CCR - McIntosh AP

Lab ID:	103222002	Date Received:	5/6/2016 10:25
Sample ID:	MGWA-5	Date Collected:	5/5/2016 15:50
Sample Description	McIntosh AP	Matrix:	Water
Location	McIntosh AP		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6010D						
INORGANICS					5/9/2016 10:55	KLW	5/9/2016 16:05	HAM	
Calcium	27.0	mg/L	0.100	0.500	5/9/2016 10:55	KLW	5/9/2016 16:05	HAM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
TOTAL METALS					5/20/2016 12:10	MRP	5/20/2016 20:54	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A						
			Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/10/2016 06:50	WCM	5/10/2016 12:57	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/9/2016 10:55	KLW	5/20/2016 17:59	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 17:59	ELS	
Boron	<0.100	mg/L	0.0200	0.100	5/9/2016 10:55	KLW	5/20/2016 17:59	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 17:59	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 17:59	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 17:59	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/20/2016 12:10	MRP	5/20/2016 20:54	ELS	
Molybdenum	0.00260J	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 17:59	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/9/2016 10:55	KLW	5/20/2016 17:59	ELS	
Antimony	0.00120J	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 17:59	ELS	
Barium	0.0295	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 17:59	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/9/2016 10:55	KLW	5/20/2016 17:59	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 17:59	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							5/17/2016 14:48	LBB	
Sulfate	4.47	mg/L	0.3000	1.00			5/16/2016 22:11	LBB	
Chloride	6.51	mg/L	0.2000	1.25			5/17/2016 14:48	LBB	
Fluoride	0.1320J	mg/L	0.0100	0.3000			5/16/2016 22:11	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/9/2016 16:15	KLW	

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ANALYTICAL RESULTS

Workorder: 103222 CCR - McIntosh AP

Lab ID:	103222002	Date Received:	5/6/2016 10:25
Sample ID:	MGWA-5	Date Collected:	5/5/2016 15:50
Sample Description	McIntosh AP	Matrix:	Water
Location	McIntosh AP		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	129	mg/L	25	25			5/9/2016 16:15	KLW	

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ANALYTICAL RESULTS

Workorder: 103222 CCR - McIntosh AP

Lab ID:	103222003	Date Received:	5/6/2016 10:25
Sample ID:	MGWC-8	Date Collected:	5/5/2016 17:22
Sample Description	McIntosh AP	Matrix:	Water
Location	McIntosh 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					5/9/2016 10:55	KLW	5/9/2016 16:12	HAM	
Calcium	41.2	mg/L	0.100	0.500	5/9/2016 10:55	KLW	5/9/2016 16:12	HAM	

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

TOTAL METALS					5/10/2016 06:50	WCM	5/10/2016 13:00	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/10/2016 06:50	WCM	5/10/2016 13:00	WCM	

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

Lithium	0.0252J	mg/L	0.0100	0.0500	5/9/2016 10:55	KLW	5/20/2016 18:38	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 18:38	ELS	
Boron	0.976	mg/L	0.0400	0.200	5/9/2016 10:55	KLW	5/20/2016 20:07	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 18:38	ELS	
Cobalt	0.00359J	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 18:38	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 18:38	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/20/2016 12:10	MRP	5/20/2016 21:08	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 18:38	ELS	
Cadmium	0.000784J	mg/L	0.000100	0.00100	5/9/2016 10:55	KLW	5/20/2016 18:38	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 18:38	ELS	
Barium	0.0364	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 18:38	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/9/2016 10:55	KLW	5/20/2016 18:38	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 18:38	ELS	

Analysis Desc: EPA 300		Analytical Method: EPA 300							
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TOTAL NUTRIENTS							5/17/2016 15:27	LBB	
Sulfate	144	mg/L	3.00	10.0			5/17/2016 15:27	LBB	
Chloride	10.1	mg/L	0.4000	2.50			5/17/2016 15:27	LBB	
Fluoride	0.1030J	mg/L	0.0100	0.3000			5/16/2016 22:49	LBB	

Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
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WET CHEMISTRY							5/9/2016 16:15	KLW	
TDS	287	mg/L	25	25			5/9/2016 16:15	KLW	

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ANALYTICAL RESULTS

Workorder: 103222 CCR - McIntosh AP

Lab ID:	103222004	Date Received:	5/6/2016 10:25
Sample ID:	MGWA-10	Date Collected:	5/5/2016 13:30
Sample Description	McIntosh AP	Matrix:	Water
Location	McIntosh AP		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					5/9/2016 10:55	KLW	5/9/2016 16:54	HAM	
Calcium	8.83	mg/L	0.100	0.500	5/9/2016 10:55	KLW	5/9/2016 16:54	HAM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
TOTAL METALS					5/9/2016 10:55	KLW	5/20/2016 18:42	ELS	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
Mercury	<0.000500	mg/L	0.000250	0.000500	5/10/2016 06:50	WCM	5/10/2016 13:02	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	5/9/2016 10:55	KLW	5/20/2016 18:42	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 18:42	ELS	
Boron	<0.100	mg/L	0.0200	0.100	5/9/2016 10:55	KLW	5/20/2016 18:42	ELS	
Chromium	0.00249J	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 18:42	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 18:42	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 18:42	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/20/2016 12:10	MRP	5/20/2016 21:13	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 18:42	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/9/2016 10:55	KLW	5/20/2016 18:42	ELS	
Antimony	0.00112J	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 18:42	ELS	
Barium	0.0376	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 18:42	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/9/2016 10:55	KLW	5/20/2016 18:42	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 18:42	ELS	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							5/17/2016 16:05	LBB	
Sulfate	2.46	mg/L	0.3000	1.00			5/16/2016 23:28	LBB	
Chloride	7.35	mg/L	0.2000	1.25			5/17/2016 16:05	LBB	
Fluoride	0.0460J	mg/L	0.0100	0.3000			5/16/2016 23:28	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							5/9/2016 16:15	KLW	

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ANALYTICAL RESULTS

Workorder: 103222 CCR - McIntosh AP

Lab ID:	103222004	Date Received:	5/6/2016 10:25
Sample ID:	MGWA-10	Date Collected:	5/5/2016 13:30
Sample Description	McIntosh AP	Matrix:	Water
Location	McIntosh AP		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	78	mg/L	25	25			5/9/2016 16:15	KLW	

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ANALYTICAL RESULTS

Workorder: 103222 CCR - McIntosh AP

Lab ID:	103222005	Date Received:	5/6/2016 10:25
Sample ID:	MGWA-6	Date Collected:	5/5/2016 17:30
Sample Description	McIntosh AP	Matrix:	Water
Location	McIntosh 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					5/9/2016 10:55	KLW	5/10/2016 11:41	HAM	
Calcium	105	mg/L	0.500	2.50	5/9/2016 10:55	KLW	5/10/2016 11:41	HAM	

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

TOTAL METALS					5/10/2016 06:50	WCM	5/10/2016 13:10	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/10/2016 06:50	WCM	5/10/2016 13:10	WCM	

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

Lithium	<0.0500	mg/L	0.0100	0.0500	5/9/2016 10:55	KLW	5/20/2016 18:47	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 18:47	ELS	
Boron	0.157	mg/L	0.0200	0.100	5/9/2016 10:55	KLW	5/20/2016 18:47	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 18:47	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 18:47	ELS	
Arsenic	0.0343	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 18:47	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/20/2016 12:10	MRP	5/20/2016 21:18	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 18:47	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/9/2016 10:55	KLW	5/20/2016 18:47	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 18:47	ELS	
Barium	0.0595	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 18:47	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/9/2016 10:55	KLW	5/20/2016 18:47	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 18:47	ELS	

Analysis Desc: EPA 300		Analytical Method: EPA 300							
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TOTAL NUTRIENTS							5/17/2016 16:43	LBB	
Sulfate	17.8	mg/L	0.3000	1.00			5/17/2016 00:06	LBB	
Chloride	9.67	mg/L	0.2000	1.25			5/17/2016 16:43	LBB	
Fluoride	0.0910J	mg/L	0.0100	0.3000			5/17/2016 00:06	LBB	

Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
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WET CHEMISTRY							5/9/2016 16:15	KLW	
TDS	281	mg/L	25	25			5/9/2016 16:15	KLW	

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ANALYTICAL RESULTS

Workorder: 103222 CCR - McIntosh AP

Lab ID:	103222006	Date Received:	5/6/2016 10:25
Sample ID:	Dup-01	Date Collected:	5/5/2016 13:30
Sample Description	McIntosh AP	Matrix:	Water
Location	McIntosh AP		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6010D						
INORGANICS					5/9/2016 10:55	KLW	5/9/2016 17:06	HAM	
Calcium	8.70	mg/L	0.100	0.500	5/9/2016 10:55	KLW	5/9/2016 17:06	HAM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
TOTAL METALS					5/9/2016 10:55	KLW	5/20/2016 18:52	ELS	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A						
			Analytical Method: EPA 7470A						
Mercury	<0.000500	mg/L	0.000250	0.000500	5/10/2016 06:50	WCM	5/10/2016 13:16	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/9/2016 10:55	KLW	5/20/2016 18:52	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 18:52	ELS	
Boron	<0.100	mg/L	0.0200	0.100	5/9/2016 10:55	KLW	5/20/2016 18:52	ELS	
Chromium	0.00255J	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 18:52	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 18:52	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 18:52	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/20/2016 12:10	MRP	5/20/2016 21:22	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 18:52	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/9/2016 10:55	KLW	5/20/2016 18:52	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 18:52	ELS	
Barium	0.0378	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 18:52	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/9/2016 10:55	KLW	5/20/2016 18:52	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 18:52	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							5/17/2016 04:35	LBB	
Sulfate	2.45	mg/L	0.3000	1.00			5/17/2016 04:35	LBB	
Chloride	7.36	mg/L	0.2000	1.25			5/17/2016 17:22	LBB	
Fluoride	0.0460J	mg/L	0.0100	0.3000			5/17/2016 04:35	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/9/2016 16:15	KLW	

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ANALYTICAL RESULTS

Workorder: 103222 CCR - McIntosh AP

Lab ID:	103222006	Date Received:	5/6/2016 10:25
Sample ID:	Dup-01	Date Collected:	5/5/2016 13:30
Sample Description	McIntosh AP	Matrix:	Water
Location	McIntosh AP		

Parameters	Results	Units	MDL	RL Prepared	By	Analyzed	By	Qual
TDS	53	mg/L	25	25		5/9/2016 16:15	KLW	

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ANALYTICAL RESULTS QUALIFIERS

Workorder: 103222 CCR - McIntosh 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: 103222 CCR - McIntosh AP

QC Batch: DIGM/4296 Analysis Method: EPA 6010D
 QC Batch Method: EPA 3005A
 Associated Lab Samples: 103222002 103222003 103222004 103222005 103222006

METHOD BLANK: 105704

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

LABORATORY CONTROL SAMPLE: 105705

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
INORGANICS					
Calcium	mg/L	5	5.13	103	80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105706 105707 Original: 103222003

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
INORGANICS											
Calcium	mg/L	41.2	5	46.5	46.4	105	105	75-125	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105708 105709 Original: 103225001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
INORGANICS											
Calcium	mg/L	62.4	5	68.0	68.0	111	111	75-125	0	20	

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QUALITY CONTROL DATA

Workorder: 103222 CCR - McIntosh AP

QC Batch: DIGM/4297 Analysis Method: EPA 6020B
 QC Batch Method: EPA 3005A
 Associated Lab Samples: 103222002 103222003 103222004 103222005 103222006

METHOD BLANK: 105710

Parameter	Units	Blank Result	Reporting Limit Qualifiers
TOTAL METALS			
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
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: 105711

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
TOTAL METALS					
Lithium	mg/L	0.2	0.206	103	80-120
Beryllium	mg/L	0.1	0.0999	99.9	80-120
Boron	mg/L	0.1	0.103	103	80-120
Chromium	mg/L	0.1	0.103	103	80-120
Cobalt	mg/L	0.1	0.103	103	80-120
Arsenic	mg/L	0.1	0.0997	99.7	80-120
Molybdenum	mg/L	0.1	0.0990	99	80-120
Cadmium	mg/L	0.1	0.101	101	80-120
Antimony	mg/L	0.1	0.102	102	80-120
Barium	mg/L	0.1	0.100	100	80-120
Thallium	mg/L	0.1	0.0955	95.5	80-120
Lead	mg/L	0.1	0.101	101	80-120

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QUALITY CONTROL DATA

Workorder: 103222 CCR - McIntosh AP

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105712 105713 Original: 103222002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Lithium	mg/L	0.00466	0.2	0.194	0.213	94.5	104	75-125	9.6	20	
Beryllium	mg/L	1.8e-005	0.1	0.0953	0.102	95.3	102	75-125	6.8	20	
Boron	mg/L	0.0191	0.1	0.111	0.125	91.5	106	75-125	14.7	20	
Chromium	mg/L	0.00040	0.1	0.102	0.109	102	109	75-125	6.6	20	
Cobalt	mg/L	2.4e-005	0.1	0.0997	0.107	99.7	106	75-125	6.1	20	
Arsenic	mg/L	0.00093	0.1	0.101	0.107	100	106	75-125	5.8	20	
Molybdenum	mg/L	0.0026	0.1	0.105	0.112	103	110	75-125	6.6	20	
Cadmium	mg/L	1.7e-005	0.1	0.101	0.108	101	108	75-125	6.7	20	
Antimony	mg/L	0.0012	0.1	0.104	0.111	103	110	75-125	6.6	20	
Barium	mg/L	0.0295	0.1	0.129	0.136	99.3	107	75-125	7.5	20	
Thallium	mg/L	1.2e-005	0.1	0.0958	0.102	95.8	102	75-125	6.3	20	
Lead	mg/L	5.3e-005	0.1	0.101	0.107	101	107	75-125	5.8	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105714 105715 Original: 103225001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Lithium	mg/L	0.00037	0.2	0.213	0.218	106	109	75-125	2.8	20	
Beryllium	mg/L	2e-006	0.1	0.103	0.106	103	106	75-125	2.9	20	
Boron	mg/L	0.0271	0.1	0.132	0.136	105	109	75-125	3.7	20	
Chromium	mg/L	0.00039	0.1	0.105	0.107	104	106	75-125	1.9	20	
Cobalt	mg/L	3.7e-005	0.1	0.0999	0.102	99.8	102	75-125	2.2	20	
Arsenic	mg/L	0.00010	0.1	0.103	0.105	103	104	75-125	0.97	20	
Molybdenum	mg/L	0.00431	0.1	0.111	0.115	107	110	75-125	2.8	20	
Cadmium	mg/L	1e-006	0.1	0.105	0.107	105	107	75-125	1.9	20	
Antimony	mg/L	0.00066	0.1	0.109	0.111	108	110	75-125	1.8	20	
Barium	mg/L	0.0233	0.1	0.127	0.126	104	103	75-125	0.97	20	
Thallium	mg/L	0.00015	0.1	0.0995	0.101	99.3	101	75-125	1.7	20	
Lead	mg/L	3.9e-005	0.1	0.104	0.106	104	106	75-125	1.9	20	

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QUALITY CONTROL DATA

Workorder: 103222 CCR - McIntosh AP

QC Batch: GRAV/2863 Analysis Method: SM 2540C
 QC Batch Method: SM 2540C
 Associated Lab Samples: 103222002 103222003 103222004 103222005 103222006

METHOD BLANK: 105728

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

LABORATORY CONTROL SAMPLE: 105731

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
WET CHEMISTRY					
TDS	mg/L	241	220	91.3	90-110

SAMPLE DUPLICATE: 105729 Original: 103214001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
TDS	mg/L	63	67	6.2	20

SAMPLE DUPLICATE: 105730 Original: 103228003

Parameter	Units	Original Result	DUP Result	RPD	Max RPD Qualifiers
WET CHEMISTRY					
TDS	mg/L	380	342	10.5	20

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QUALITY CONTROL DATA

Workorder: 103222 CCR - McIntosh AP

QC Batch: HGPR/1651 Analysis Method: EPA 7470A
 QC Batch Method: EPA 7470A
 Associated Lab Samples: 103222002 103222003 103222004 103222005 103222006

METHOD BLANK: 105740

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

METHOD BLANK: 105746

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

LABORATORY CONTROL SAMPLE: 105741

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

LABORATORY CONTROL SAMPLE: 105742

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.0122	0.0129	105	80-120	

LABORATORY CONTROL SAMPLE: 105747

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

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QUALITY CONTROL DATA

Workorder: 103222 CCR - McIntosh AP

QC Batch: IC/3027 Analysis Method: EPA 300
 QC Batch Method: EPA 300
 Associated Lab Samples: 103222002 103222003 103222004 103222005 103222006

METHOD BLANK: 105944

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

METHOD BLANK: 105954

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: 105945

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
Sulfate	mg/L	5	4.91	98.2	90-110
Fluoride	mg/L	0.5	0.5210	104	90-110

LABORATORY CONTROL SAMPLE: 105947

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
Chloride	mg/L	11.3	11.9	105	90-110
Fluoride	mg/L	6.83	7.00	102	90-110

LABORATORY CONTROL SAMPLE: 105955

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
Chloride	mg/L	0.5	0.5120	102	90-110
Sulfate	mg/L	5	5.06	101	90-110
Fluoride	mg/L	0.5	0.5330	107	90-110

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QUALITY CONTROL DATA

Workorder: 103222 CCR - McIntosh AP

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105950 105951 Original: 103222005

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Fluoride	mg/L	0.091	1	1.15	1.13	106	104	90-110	1.9	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105952 105953 Original: 103222005

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Sulfate	mg/L	17.8	10	27.4	27.2	96	93.8	90-110	2.3	10	

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QUALITY CONTROL DATA

Workorder: 103222 CCR - McIntosh AP

QC Batch: DIGM/4324 Analysis Method: EPA 6020B
 QC Batch Method: EPA 3005A
 Associated Lab Samples: 103222002 103222003 103222004 103222005 103222006

METHOD BLANK: 106234

Parameter	Units	Blank Result	Reporting Limit Qualifiers
TOTAL METALS			
Selenium	mg/L	<0.0100	0.0100

LABORATORY CONTROL SAMPLE: 106235

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
TOTAL METALS					
Selenium	mg/L	0.3	0.315	105	80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105712 105713 Original: 103222002

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Selenium	mg/L	0.00046	0.3	0.282	0.274	93.9	91	75-125	3.1	20	

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 103222 CCR - McIntosh AP

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
103222002	MGWA-5	EPA 3005A	DIGM/4296	EPA 6010D	ICP/5001
103222003	MGWC-8	EPA 3005A	DIGM/4296	EPA 6010D	ICP/5001
103222004	MGWA-10	EPA 3005A	DIGM/4296	EPA 6010D	ICP/5001
103222005	MGWA-6	EPA 3005A	DIGM/4296	EPA 6010D	ICP/5001
103222006	Dup-01	EPA 3005A	DIGM/4296	EPA 6010D	ICP/5001
103222002	MGWA-5	EPA 3005A	DIGM/4297	EPA 6020B	ICPM/1056
103222003	MGWC-8	EPA 3005A	DIGM/4297	EPA 6020B	ICPM/1056
103222004	MGWA-10	EPA 3005A	DIGM/4297	EPA 6020B	ICPM/1056
103222005	MGWA-6	EPA 3005A	DIGM/4297	EPA 6020B	ICPM/1056
103222006	Dup-01	EPA 3005A	DIGM/4297	EPA 6020B	ICPM/1056
103222002	MGWA-5	SM 2540C	GRAV/2863		
103222003	MGWC-8	SM 2540C	GRAV/2863		
103222004	MGWA-10	SM 2540C	GRAV/2863		
103222005	MGWA-6	SM 2540C	GRAV/2863		
103222006	Dup-01	SM 2540C	GRAV/2863		
103222002	MGWA-5	EPA 7470A	HGPR/1651	EPA 7470A	CVAA/1836
103222003	MGWC-8	EPA 7470A	HGPR/1651	EPA 7470A	CVAA/1836
103222004	MGWA-10	EPA 7470A	HGPR/1651	EPA 7470A	CVAA/1836
103222005	MGWA-6	EPA 7470A	HGPR/1651	EPA 7470A	CVAA/1836
103222006	Dup-01	EPA 7470A	HGPR/1651	EPA 7470A	CVAA/1836
103222002	MGWA-5	EPA 300	IC/3027		
103222003	MGWC-8	EPA 300	IC/3027		
103222004	MGWA-10	EPA 300	IC/3027		
103222005	MGWA-6	EPA 300	IC/3027		
103222006	Dup-01	EPA 300	IC/3027		
103222002	MGWA-5	EPA 3005A	DIGM/4324	EPA 6020B	ICPM/1057
103222003	MGWC-8	EPA 3005A	DIGM/4324	EPA 6020B	ICPM/1057
103222004	MGWA-10	EPA 3005A	DIGM/4324	EPA 6020B	ICPM/1057

Report ID: 103222 - 5031417
 GPC Report Page 22 of 24

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 103222 CCR - McIntosh AP

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
103222005	MGWA-6	EPA 3005A	DIGM/4324	EPA 6020B	ICPM/1057
103222006	Dup-01	EPA 3005A	DIGM/4324	EPA 6020B	ICPM/1057

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LABORATORY CERTIFICATIONS

Workorder: 103222 CCR - McIntosh AP

Certification Program	Certification Number
NELAC	E57554

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Work Order No. 103929 of 1
Reviewed By: *[Signature]*

LAB USE ONLY

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

ANA - IS REQUEST AND CHAIN OF CUSTODY RECORD
Seal ID: 2016050501

Sample Shipment Date:⁸ 5/5/16
Sample Received Date:⁹

Southern Company Services
Joju Abraham
241 Ralph McGill Blvd SE B10185
Atlanta, GA 30308
404-506-7239
Joju Abraham
Plant McIntosh AP
McIntosh AP CCR GW

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

X ¹² Standard Turnaround Time
¹¹ Page 1 of 1
 # of Business Days (Rush)
(Must be cleared through Env. Lab. Prior to shipment)

Signature: *[Signature]*

Sampled By:¹⁰ Adria Reimer (ALR)

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

HNO3 N	Ice I	HNO3 N				PRESERVATIVE ²⁰							Sample Type Key: 22 G-Grab O-Other C-Composite
EPA 6020 & EPA 7470		Metals app. III & IV	Cl, F, SO4 EPA 300	TDS SM2540C	Radium 226 & 228 Ga Tech	ANALYSIS REQUESTED ²¹							Matrix Key: 23 O-Oil S-Solid SW-Surface Water SU-Sludge GW-Ground Water WW-Waste Water D-W-Drinking Water
													Preservative Key: 24 H-Hydrochloric Acid N-Nitric Acid S-Sulfuric Acid SF-Sodium Hydroxide SB-Sodium Bisulfate P-Phosphoric Acid ST-Sodium Thiosulfate I-Ice U-Unpreserved

17	Sample Type	18	Matrix	19	No. of Containers
103929001 ✓ 2	MGWA-09 MGWA-05	5/5/16 1244 5/5/16 1550	McIntosh AP McIntosh AP	3 3	

LAB USE ONLY ¹³	LAB ID	Sample Number ¹⁴	Collection ¹⁵		Sample Description ¹⁶
			Date	Time	

LAB USE ONLY: Sample Receipt Information ²⁸

Retrieved by: ²⁵ <i>[Signature]</i>	Date/Time	5/5/16 1730	3.10 CG PEL-1R-4P in white cooler in good condition, seal PHL
Retrieved by: ²⁷ <i>[Signature]</i>	Date/Time	5/11/16 10:45	
Retrieved by:	Date/Time		
Retrieved by:	Date/Time	AMJ 5/16/16	

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. 1032203
 Reviewed By: *RL*
 Page 1 of 1

Serial ID: 20160505-01

Sample Shipment Date:⁸ 5/5/16 Standard Turnaround Time 12
 Sample Received Date:⁹ _____ # of Business Days (Rush) (Must be cleared through Env. Lab. Prior to shipment)

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

Signature
 Authorization to sample for analysis will be assumed acceptable by customer unless stated otherwise.

LAB USE ONLY LAB ID	Sample Number ¹⁴		Collection ¹⁵		Sample Description ¹⁶	Sample Type	PRESERVATIVE ²⁰		ANALYSIS REQUESTED ²¹	LAB USE ONLY ²⁵ Comments											
	Date	Time	Date	Time			HNO3	Ice			HNO3	N									
10322003	MW6C-08		5/5/16		McIntosh AP	G GW			X	X	X										

LAB USE ONLY: Sample Receipt Information²⁸ 78300 1771458

Requested by:²⁶ J.A. Date/Time 5/5/16 1930
 Received by:²⁷ J.A. Date/Time 5/6/16 0925
 Requested by:²⁸ [Signature] Date/Time 5/6/16 @ 10:25

Remarks: 3.10 (6 PEL - 1R - 4P) with ice, contains good condition, seal PL-2, FEL-EX #
Missing collection time on COC, sample logged in base on sample container label.

LAB USE ONLY

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

Work Order No. _____
 Reviewed By: 103229 JAS
 Page 1 of 1

Seal ID: 20160505-02

Sample Shipment Date:⁸ 5/5/16
 Sample Received Date:⁹ _____
 Sampled By:¹⁰ Nicolas Vrey
 ¹¹ Standard Turnaround Time
 ¹² # of Business Days (Rush)
 (Must be cleared through Env. Lab. Prior to shipment)

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

LAB USE ONLY LAB ID	Sample Number ¹⁴	Collection ¹⁵		Sample Description ¹⁶	Sample Type	Matrix	No. of Containers	ANALYSIS REQUESTED ²¹			PRESERVATIVE ²⁰			Sample Type Key: ²²
		Date	Time					HNO3 N	Ice I	HNO3 N	G-Grab O-Other C-Composite	Matrix Key: ²³		
103229004	MGWA-10 MGWA-10	5/5/16	1330	MGWA-10 McIntosh AP CCR GW	GW	GW	3	Metals app. III & IV EPA 6020 & EPA 7470	Cl, F, SO4 EPA 300 TDS SM2540C	Radium 226 & 228 Ga Tech			S-Solid SW-Surface Water WW-Waste Water DW-Drinking Water	W-Wipe GW-Ground Water DW-Drinking Water
5	MGWA-06	5/5/16	1730	MGWA-06 McIntosh AP	GW	GW	3							
6	DUP-01	5/5/16	1200	DUP-01 McIntosh AP	GW	GW	3							
			1330											

LAB USE ONLY: Sample Receipt Information²⁸

Relinquished by:²⁶ [Signature] Date/Time 5/5/16 1930
 Received by:²⁷ [Signature] Date/Time 5/5/16 1930
 Relinquished by:²⁸ [Signature] Date/Time _____
 Received by:²⁹ _____ Date/Time _____

310 CPET-R-4PL with ice cooling and Caobtion seal PHL4
 Feels # 783001971488

Sample Receipt Checklist



Client: McIntosh
 Workorder No.: 103222
 Carrier: FEDEX

of Samples: 6
 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	False	
COC is present	True	Overwrite present on COC without initial and date.
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	False	Sample Id MWGC -08 was labeled incorrectly on both COC and sample container label; sample was logged in based on verification email provided by customer.
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	Missing collection time on COC for sample MGWC-08, sample was logged in based on sample container label.
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:

May 27, 2016

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

RE: Workorder: 103228 CCR - McIntosh 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:

Maria Padilla

mrpadill@southernco.com

(404) 799-2188 / 8-530-2188

Respectfully submitted,



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

Report ID: 103228 - 5029381
GPC Report Page 1 of 22

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SAMPLE SUMMARY

Workorder: 103228 CCR - McIntosh AP

Lab ID	Sample ID	Analysis Request Number	Matrix	Date Collected	Date Received
103228001	FB-01	N/A	Water	5/5/2016 19:00	5/6/2016 16:02
103228002	EB-01	N/A	Water	5/5/2016 19:30	5/6/2016 16:02
103228003	MGWC-3	N/A	Water	5/6/2016 09:30	5/6/2016 16:02
103228004	MGWC-1	N/A	Water	5/6/2016 09:56	5/6/2016 16:02
103228005	MGWC-7	N/A	Water	5/5/2016 18:52	5/6/2016 16:02
103228006	MGWC-2	N/A	Water	5/6/2016 09:25	5/6/2016 16:02

Report ID: 103228 - 5029381
GPC Report Page 2 of 22

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ANALYTICAL RESULTS

Workorder: 103228 CCR - McIntosh AP

Lab ID: 103228001 **Date Received:** 5/6/2016 16:02
Sample ID: FB-01 **Date Collected:** 5/5/2016 19:00
Sample Description: McIntosh AP CCR (Field Balnk) **Matrix:** Water
Location: McIntosh AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					5/9/2016 10:55	KLW	5/9/2016 18:06	HAM	
Calcium	<0.500	mg/L	0.100	0.500	5/9/2016 10:55	KLW	5/9/2016 18:06	HAM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
TOTAL METALS					5/9/2016 10:55	KLW	5/20/2016 19:20	ELS	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
Mercury	<0.000500	mg/L	0.000250	0.000500	5/10/2016 06:50	WCM	5/10/2016 13:27	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	5/9/2016 10:55	KLW	5/20/2016 19:20	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 19:20	ELS	
Boron	<0.100	mg/L	0.0200	0.100	5/9/2016 10:55	KLW	5/20/2016 19:20	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:20	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:20	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 19:20	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:20	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:20	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/9/2016 10:55	KLW	5/20/2016 19:20	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 19:20	ELS	
Barium	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:20	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/9/2016 10:55	KLW	5/20/2016 19:20	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 19:20	ELS	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							5/17/2016 07:09	LBB	
Sulfate	<1.00	mg/L	0.3000	1.00			5/17/2016 07:09	LBB	
Chloride	<0.2500	mg/L	0.0400	0.2500			5/17/2016 07:09	LBB	
Fluoride	<0.3000	mg/L	0.0100	0.3000			5/17/2016 07:09	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							5/9/2016 16:15	KLW	

Report ID: 103228 - 5029381
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ANALYTICAL RESULTS

Workorder: 103228 CCR - McIntosh AP

Lab ID:	103228001	Date Received:	5/6/2016 16:02
Sample ID:	FB-01	Date Collected:	5/5/2016 19:00
Sample Description	McIntosh AP CCR (Field Balnk)	Matrix:	Water
Location	McIntosh AP		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	<25	mg/L	25	25			5/9/2016 16:15	KLW	

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ANALYTICAL RESULTS

Workorder: 103228 CCR - McIntosh AP

Lab ID:	103228002	Date Received:	5/6/2016 16:02
Sample ID:	EB-01	Date Collected:	5/5/2016 19:30
Sample Description	McIntosh AP CCR (Equipment Blank)	Matrix:	Water
Location	McIntosh AP		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6010D							
INORGANICS					5/9/2016 10:55	KLW	5/9/2016 18:12	HAM	
Calcium	<0.500	mg/L	0.100	0.500	5/9/2016 10:55	KLW	5/9/2016 18:12	HAM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
TOTAL METALS					5/9/2016 10:55	KLW	5/20/2016 19:44	ELS	
Analysis Desc: EPA 7470A		Preparation Method: EPA 7470A							
		Analytical Method: EPA 7470A							
Mercury	<0.000500	mg/L	0.000250	0.000500	5/10/2016 06:50	WCM	5/10/2016 13:40	WCM	
Analysis Desc: EPA 6020B		Preparation Method: EPA 3005A							
		Analytical Method: EPA 6020B							
Lithium	<0.0500	mg/L	0.0100	0.0500	5/9/2016 10:55	KLW	5/20/2016 19:44	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 19:44	ELS	
Boron	<0.100	mg/L	0.0200	0.100	5/9/2016 10:55	KLW	5/20/2016 19:44	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:44	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:44	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 19:44	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:44	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:44	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/9/2016 10:55	KLW	5/20/2016 19:44	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 19:44	ELS	
Barium	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:44	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/9/2016 10:55	KLW	5/20/2016 19:44	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 19:44	ELS	
Analysis Desc: EPA 300		Analytical Method: EPA 300							
TOTAL NUTRIENTS							5/17/2016 09:41	LBB	
Sulfate	<1.00	mg/L	0.3000	1.00			5/17/2016 09:41	LBB	
Chloride	<0.2500	mg/L	0.0400	0.2500			5/17/2016 09:41	LBB	
Fluoride	<0.3000	mg/L	0.0100	0.3000			5/17/2016 09:41	LBB	
Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
WET CHEMISTRY							5/9/2016 16:15	KLW	

Report ID: 103228 - 5029381
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ANALYTICAL RESULTS

Workorder: 103228 CCR - McIntosh AP

Lab ID:	103228002	Date Received:	5/6/2016 16:02
Sample ID:	EB-01	Date Collected:	5/5/2016 19:30
Sample Description	McIntosh AP CCR (Equipment Blank)	Matrix:	Water
Location	McIntosh AP		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
TDS	<25	mg/L	25	25			5/9/2016 16:15	KLW	

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ANALYTICAL RESULTS

Workorder: 103228 CCR - McIntosh AP

Lab ID: 103228003 **Date Received:** 5/6/2016 16:02
Sample ID: MGWC-3 **Date Collected:** 5/6/2016 09:30
Sample Description: McIntosh AP CCR – Groundwater **Matrix:** Water
Location: McIntosh AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6010D						
INORGANICS					5/9/2016 10:55	KLW	5/10/2016 12:05	HAM	
Calcium	109	mg/L	0.500	2.50	5/9/2016 10:55	KLW	5/10/2016 12:05	HAM	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A						
			Analytical Method: EPA 7470A						
TOTAL METALS					5/10/2016 06:50	WCM	5/10/2016 13:43	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/10/2016 06:50	WCM	5/10/2016 13:43	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
Lithium	0.0113J	mg/L	0.0100	0.0500	5/9/2016 10:55	KLW	5/20/2016 19:48	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 19:48	ELS	
Boron	0.926	mg/L	0.0400	0.200	5/9/2016 10:55	KLW	5/20/2016 20:12	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:48	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:48	ELS	
Arsenic	0.00154J	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 19:48	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:48	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:48	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/9/2016 10:55	KLW	5/20/2016 19:48	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 19:48	ELS	
Barium	0.151	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:48	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/9/2016 10:55	KLW	5/20/2016 19:48	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 19:48	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							5/17/2016 18:00	LBB	
Sulfate	94.2	mg/L	3.00	10.0			5/17/2016 18:00	LBB	
Chloride	12.5	mg/L	0.4000	2.50			5/17/2016 18:00	LBB	
Fluoride	0.0860J	mg/L	0.0100	0.3000			5/17/2016 10:19	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/9/2016 16:15	KLW	
TDS	380	mg/L	25	25			5/9/2016 16:15	KLW	

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ANALYTICAL RESULTS

Workorder: 103228 CCR - McIntosh AP

Lab ID:	103228004	Date Received:	5/6/2016 16:02
Sample ID:	MGWC-1	Date Collected:	5/6/2016 09:56
Sample Description	McIntosh AP	Matrix:	Water
Location	McIntosh 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					5/9/2016 10:55	KLW	5/10/2016 12:11	HAM	
Calcium	92.5	mg/L	0.200	1.00	5/9/2016 10:55	KLW	5/10/2016 12:11	HAM	

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

TOTAL METALS					5/10/2016 06:50	WCM	5/10/2016 13:51	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/10/2016 06:50	WCM	5/10/2016 13:51	WCM	

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

Lithium	0.0128J	mg/L	0.0100	0.0500	5/9/2016 10:55	KLW	5/20/2016 19:53	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 19:53	ELS	
Boron	0.567	mg/L	0.0200	0.100	5/9/2016 10:55	KLW	5/20/2016 19:53	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:53	ELS	
Cobalt	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:53	ELS	
Arsenic	0.00299J	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 19:53	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:53	ELS	
Molybdenum	0.00210J	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:53	ELS	
Cadmium	0.000126J	mg/L	0.000100	0.00100	5/9/2016 10:55	KLW	5/20/2016 19:53	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 19:53	ELS	
Barium	0.110	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:53	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/9/2016 10:55	KLW	5/20/2016 19:53	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 19:53	ELS	

Analysis Desc: EPA 300		Analytical Method: EPA 300							
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TOTAL NUTRIENTS							5/17/2016 18:39	LBB	
Sulfate	106	mg/L	3.00	10.0			5/17/2016 18:39	LBB	
Chloride	13.2	mg/L	0.4000	2.50			5/17/2016 18:39	LBB	
Fluoride	0.2800J	mg/L	0.0100	0.3000			5/17/2016 10:58	LBB	

Analysis Desc: SM 2540C		Analytical Method: SM 2540C							
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WET CHEMISTRY							5/9/2016 16:15	KLW	
TDS	282	mg/L	25	25			5/9/2016 16:15	KLW	

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ANALYTICAL RESULTS

Workorder: 103228 CCR - McIntosh AP

Lab ID:	103228005	Date Received:	5/6/2016 16:02
Sample ID:	MGWC-7	Date Collected:	5/5/2016 18:52
Sample Description	Information Not Provided	Matrix:	Water
Location	McIntosh AP		

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6010D						
INORGANICS					5/9/2016 10:55	KLW	5/9/2016 18:30	HAM	
Calcium	45.0	mg/L	0.100	0.500	5/9/2016 10:55	KLW	5/9/2016 18:30	HAM	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A						
			Analytical Method: EPA 7470A						
TOTAL METALS					5/10/2016 06:50	WCM	5/10/2016 13:56	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/10/2016 06:50	WCM	5/10/2016 13:56	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
Lithium	0.0586	mg/L	0.0100	0.0500	5/9/2016 10:55	KLW	5/20/2016 19:58	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 19:58	ELS	
Boron	0.855	mg/L	0.0400	0.200	5/9/2016 10:55	KLW	5/20/2016 20:17	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:58	ELS	
Cobalt	0.00360J	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:58	ELS	
Arsenic	0.00143J	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 19:58	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:58	ELS	
Molybdenum	0.00351J	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:58	ELS	
Cadmium	<0.00100	mg/L	0.000100	0.00100	5/9/2016 10:55	KLW	5/20/2016 19:58	ELS	
Antimony	0.00197J	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 19:58	ELS	
Barium	0.0390	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 19:58	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/9/2016 10:55	KLW	5/20/2016 19:58	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 19:58	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							5/17/2016 19:17	LBB	
Sulfate	116	mg/L	3.00	10.0			5/17/2016 19:17	LBB	
Chloride	13.0	mg/L	0.4000	2.50			5/17/2016 19:17	LBB	
Fluoride	0.3940	mg/L	0.0100	0.3000			5/17/2016 11:36	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/9/2016 16:15	KLW	
TDS	272	mg/L	25	25			5/9/2016 16:15	KLW	

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ANALYTICAL RESULTS

Workorder: 103228 CCR - McIntosh AP

Lab ID: 103228006 **Date Received:** 5/6/2016 16:02
Sample ID: MGWC-2 **Date Collected:** 5/6/2016 09:25
Sample Description: Information Not Provided **Matrix:** Water
Location: McIntosh AP

Parameters	Results	Units	MDL	RL	Prepared	By	Analyzed	By	Qual
Analysis Desc: EPA 6010D			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6010D						
INORGANICS					5/9/2016 10:55	KLW	5/10/2016 12:54	HAM	
Calcium	131	mg/L	0.500	2.50	5/9/2016 10:55	KLW	5/10/2016 12:54	HAM	
Analysis Desc: EPA 7470A			Preparation Method: EPA 7470A						
			Analytical Method: EPA 7470A						
TOTAL METALS					5/10/2016 06:50	WCM	5/10/2016 13:59	WCM	
Mercury	<0.000500	mg/L	0.000250	0.000500	5/10/2016 06:50	WCM	5/10/2016 13:59	WCM	
Analysis Desc: EPA 6020B			Preparation Method: EPA 3005A						
			Analytical Method: EPA 6020B						
Lithium	<0.0500	mg/L	0.0100	0.0500	5/9/2016 10:55	KLW	5/20/2016 20:03	ELS	
Beryllium	<0.00300	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 20:03	ELS	
Boron	3.78	mg/L	0.100	0.500	5/9/2016 10:55	KLW	5/20/2016 20:21	ELS	
Chromium	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 20:03	ELS	
Cobalt	0.00311J	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 20:03	ELS	
Arsenic	<0.00500	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 20:03	ELS	
Selenium	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 20:03	ELS	
Molybdenum	<0.0100	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 20:03	ELS	
Cadmium	0.00166	mg/L	0.000100	0.00100	5/9/2016 10:55	KLW	5/20/2016 20:03	ELS	
Antimony	<0.00300	mg/L	0.000600	0.00300	5/9/2016 10:55	KLW	5/20/2016 20:03	ELS	
Barium	0.0605	mg/L	0.00200	0.0100	5/9/2016 10:55	KLW	5/20/2016 20:03	ELS	
Thallium	<0.00100	mg/L	0.000200	0.00100	5/9/2016 10:55	KLW	5/20/2016 20:03	ELS	
Lead	<0.00500	mg/L	0.00100	0.00500	5/9/2016 10:55	KLW	5/20/2016 20:03	ELS	
Analysis Desc: EPA 300			Analytical Method: EPA 300						
TOTAL NUTRIENTS							5/17/2016 19:55	LBB	
Sulfate	445	mg/L	7.50	25.0			5/17/2016 19:55	LBB	
Chloride	41.0	mg/L	1.00	6.25			5/17/2016 19:55	LBB	
Fluoride	0.0880J	mg/L	0.0100	0.3000			5/17/2016 12:15	LBB	
Analysis Desc: SM 2540C			Analytical Method: SM 2540C						
WET CHEMISTRY							5/9/2016 16:15	KLW	
TDS	661	mg/L	25	25			5/9/2016 16:15	KLW	

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ANALYTICAL RESULTS QUALIFIERS

Workorder: 103228 CCR - McIntosh 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: 103228 CCR - McIntosh AP

QC Batch:	DIGM/4296	Analysis Method:		EPA 6010D		
QC Batch Method:	EPA 3005A					
Associated Lab Samples:	103222002	103222003	103222004	103222005	103222006	103228001
	103228002	103228003	103228004	103228005	103228006	

METHOD BLANK: 105704

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

LABORATORY CONTROL SAMPLE: 105705

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
INORGANICS						
Calcium	mg/L	5	5.13	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105708 105709 Original: 103225001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
INORGANICS											
Calcium	mg/L	62.4	5	68.0	68.0	111	111	75-125	0	20	

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QUALITY CONTROL DATA

Workorder: 103228 CCR - McIntosh AP

QC Batch:	DIGM/4297		Analysis Method:	EPA 6020B		
QC Batch Method:	EPA 3005A					
Associated Lab Samples:	103222002	103222003	103222004	103222005	103222006	103228001
	103228002	103228003	103228004	103228005	103228006	

METHOD BLANK: 105710

Parameter	Units	Blank Result	Reporting Limit Qualifiers
TOTAL METALS			
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: 105711

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits Qualifiers
TOTAL METALS					
Lithium	mg/L	0.2	0.206	103	80-120
Beryllium	mg/L	0.1	0.0999	99.9	80-120
Boron	mg/L	0.1	0.103	103	80-120
Chromium	mg/L	0.1	0.103	103	80-120
Cobalt	mg/L	0.1	0.103	103	80-120
Arsenic	mg/L	0.1	0.0997	99.7	80-120
Selenium	mg/L	0.1	0.0987	98.7	80-120
Molybdenum	mg/L	0.1	0.0990	99	80-120
Cadmium	mg/L	0.1	0.101	101	80-120
Antimony	mg/L	0.1	0.102	102	80-120
Barium	mg/L	0.1	0.100	100	80-120
Thallium	mg/L	0.1	0.0955	95.5	80-120
Lead	mg/L	0.1	0.101	101	80-120

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QUALITY CONTROL DATA

Workorder: 103228 CCR - McIntosh AP

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105714 105715 Original: 103225001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
TOTAL METALS											
Lithium	mg/L	0.00037	0.2	0.213	0.218	106	109	75-125	2.8	20	
Beryllium	mg/L	2e-006	0.1	0.103	0.106	103	106	75-125	2.9	20	
Boron	mg/L	0.0271	0.1	0.132	0.136	105	109	75-125	3.7	20	
Chromium	mg/L	0.00039	0.1	0.105	0.107	104	106	75-125	1.9	20	
Cobalt	mg/L	3.7e-005	0.1	0.0999	0.102	99.8	102	75-125	2.2	20	
Arsenic	mg/L	0.00010	0.1	0.103	0.105	103	104	75-125	0.97	20	
Selenium	mg/L	0.00013	0.1	0.102	0.105	102	105	75-125	2.9	20	
Molybdenum	mg/L	0.00431	0.1	0.111	0.115	107	110	75-125	2.8	20	
Cadmium	mg/L	1e-006	0.1	0.105	0.107	105	107	75-125	1.9	20	
Antimony	mg/L	0.00066	0.1	0.109	0.111	108	110	75-125	1.8	20	
Barium	mg/L	0.0233	0.1	0.127	0.126	104	103	75-125	0.97	20	
Thallium	mg/L	0.00015	0.1	0.0995	0.101	99.3	101	75-125	1.7	20	
Lead	mg/L	3.9e-005	0.1	0.104	0.106	104	106	75-125	1.9	20	

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QUALITY CONTROL DATA

Workorder: 103228 CCR - McIntosh AP

QC Batch:	GRAV/2863	Analysis Method:		SM 2540C		
QC Batch Method:	SM 2540C					
Associated Lab Samples:	103222002	103222003	103222004	103222005	103222006	103228001
	103228002	103228003	103228004	103228005	103228006	

METHOD BLANK: 105728

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

LABORATORY CONTROL SAMPLE: 105731

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
WET CHEMISTRY						
TDS	mg/L	241	220	91.3	90-110	

SAMPLE DUPLICATE: 105729 Original: 103214001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
TDS	mg/L	63	67	6.2	20	

SAMPLE DUPLICATE: 105730 Original: 103228003

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
WET CHEMISTRY						
TDS	mg/L	380	342	10.5	20	

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QUALITY CONTROL DATA

Workorder: 103228 CCR - McIntosh AP

QC Batch:	HGPR/1651		Analysis Method:	EPA 7470A		
QC Batch Method:	EPA 7470A					
Associated Lab Samples:	103222002	103222003	103222004	103222005	103222006	103228001
	103228002	103228003	103228004	103228005	103228006	

METHOD BLANK: 105740

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

METHOD BLANK: 105746

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

LABORATORY CONTROL SAMPLE: 105741

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

LABORATORY CONTROL SAMPLE: 105742

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TOTAL METALS						
Mercury	mg/L	0.0122	0.0129	105	80-120	

LABORATORY CONTROL SAMPLE: 105747

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

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QUALITY CONTROL DATA

Workorder: 103228 CCR - McIntosh AP

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105743 105744 Original: 103222004

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	0.00204	0.00202	102	101	80-120	0.99	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105748 105749 Original: 103228003

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	0.00199	0.00194	100	97	80-120	3	20	

SAMPLE DUPLICATE: 105745 Original: 103222005

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

SAMPLE DUPLICATE: 105750 Original: 103228004

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

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QUALITY CONTROL DATA

Workorder: 103228 CCR - McIntosh AP

QC Batch:	IC/3027	Analysis Method:		EPA 300		
QC Batch Method:	EPA 300					
Associated Lab Samples:	103222002	103222003	103222004	103222005	103222006	103228001
	103228002	103228003	103228004	103228005	103228006	

METHOD BLANK: 105954

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: 105947

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	11.3	11.9	105	90-110	
Fluoride	mg/L	6.83	7.00	102	90-110	

LABORATORY CONTROL SAMPLE: 105955

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.5	0.5120	102	90-110	
Sulfate	mg/L	5	5.06	101	90-110	
Fluoride	mg/L	0.5	0.5330	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105956 105957 Original: 103228001

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	1.02	1.03	102	103	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105958 105959 Original: 103228001

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Fluoride	mg/L	0	1	1.03	1.03	103	103	90-110	0	10	

CERTIFICATE OF ANALYSIS

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QUALITY CONTROL DATA

Workorder: 103228 CCR - McIntosh AP

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 105960 105961 Original: 103228001

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	9.94	9.98	99.4	99.8	90-110	0.4	10	

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 103228 CCR - McIntosh AP

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
103228001	FB-01	EPA 3005A	DIGM/4296	EPA 6010D	ICP/5001
103228002	EB-01	EPA 3005A	DIGM/4296	EPA 6010D	ICP/5001
103228003	MGWC-3	EPA 3005A	DIGM/4296	EPA 6010D	ICP/5001
103228004	MGWC-1	EPA 3005A	DIGM/4296	EPA 6010D	ICP/5001
103228005	MGWC-7	EPA 3005A	DIGM/4296	EPA 6010D	ICP/5001
103228006	MGWC-2	EPA 3005A	DIGM/4296	EPA 6010D	ICP/5001
103228001	FB-01	EPA 3005A	DIGM/4297	EPA 6020B	ICPM/1056
103228002	EB-01	EPA 3005A	DIGM/4297	EPA 6020B	ICPM/1056
103228003	MGWC-3	EPA 3005A	DIGM/4297	EPA 6020B	ICPM/1056
103228004	MGWC-1	EPA 3005A	DIGM/4297	EPA 6020B	ICPM/1056
103228005	MGWC-7	EPA 3005A	DIGM/4297	EPA 6020B	ICPM/1056
103228006	MGWC-2	EPA 3005A	DIGM/4297	EPA 6020B	ICPM/1056
103228001	FB-01	SM 2540C	GRAV/2863		
103228002	EB-01	SM 2540C	GRAV/2863		
103228003	MGWC-3	SM 2540C	GRAV/2863		
103228004	MGWC-1	SM 2540C	GRAV/2863		
103228005	MGWC-7	SM 2540C	GRAV/2863		
103228006	MGWC-2	SM 2540C	GRAV/2863		
103228001	FB-01	EPA 7470A	HGPR/1651	EPA 7470A	CVAA/1836
103228002	EB-01	EPA 7470A	HGPR/1651	EPA 7470A	CVAA/1836
103228003	MGWC-3	EPA 7470A	HGPR/1651	EPA 7470A	CVAA/1836
103228004	MGWC-1	EPA 7470A	HGPR/1651	EPA 7470A	CVAA/1836
103228005	MGWC-7	EPA 7470A	HGPR/1651	EPA 7470A	CVAA/1836
103228006	MGWC-2	EPA 7470A	HGPR/1651	EPA 7470A	CVAA/1836
103228001	FB-01	EPA 300	IC/3027		
103228002	EB-01	EPA 300	IC/3027		
103228003	MGWC-3	EPA 300	IC/3027		
103228004	MGWC-1	EPA 300	IC/3027		
103228005	MGWC-7	EPA 300	IC/3027		

Report ID: 103228 - 5029381
 GPC Report Page 20 of 22

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 103228 CCR - McIntosh AP

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
103228006	MGWC-2	EPA 300	IC/3027		

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LABORATORY CERTIFICATIONS

Workorder: 103228 CCR - McIntosh AP

Certification Program	Certification Number
NELAC	E57554

CERTIFICATE OF ANALYSIS

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ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

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

Work Order No. 103228
 Reviewed By: [Signature]
 Page 1 of 1

LAB USE ONLY

Sample Shipment Date:⁸ 5/6/16 - Hand Delivered Standard Turnaround Time
 Sample Received Date:⁹ _____ # of Business Days (Rush)
 Sampled By:¹⁰ Nicolay Vey (Must be cleared through Env. Lab. Prior to shipment)

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

LAB USE ONLY LAB ID	Sample Number ¹⁴	Collection ¹⁵		Sample Description ¹⁶	Sample Type	Matrix	No. of Containers	ANALYSIS REQUESTED ²¹			PRESERVATIVE ²⁰			Sample Type Key: ²² G-Grab O-Other C-Composite
		Date	Time					HNO3 N	Ice I	HNO3 N	O-Oil S-Solid SW-Surface Water WW-Waste Water	S-Sulfuric Acid SH-Sodium Hydroxide SB-Sodium Bisulfate ST-Sodium Thiosulfate	W-Wipe GW-Ground Water DW-Drinking Water	
103228001	FB-01	5/5/2016	1900	McIntosh AP CCR (Blank)	DIU	3		Metals app. III & IV EPA 6020 & EPA 7470						
2	FB-01	5/5/2016	1930	McIntosh AP CCR (Spike)	DIU	3		Cl, F, SO4 EPA 300 TDS SM2540C						
3	NGWC-03	5/6/2016	0930	McIntosh AP CCR - groundwater	GLU	3		Radium 226 & 228 Ga Tech						

LAB USE ONLY: Sample Receipt Information ²⁸			
Requisitioned by: ²⁶	[Signature]	Date/Time	5/6/2016 1602
Received by: ²⁷	[Signature]	Date/Time	5-6-16 @ 1602
Requisitioned by:		Date/Time	
Received by:		Date/Time	

LAB USE ONLY: Sample Receipt Information²⁸
 4.3°C (68°F - IR - 4P) Ice, hand, cooler in good condition, no seal

LAB USE ONLY

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

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

Sample Shipment Date:⁸ _____
 Sample Received Date:⁹ _____
 Sampled By:¹⁰ Will Vargo (WV)
 # of Business Days (Rush) _____
 (Must be cleared through Env. Lab. Prior to shipment)

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

LAB USE ONLY LAB ID	Sample Number ¹⁴	Collection ¹⁵		Sample Description ¹⁶	Sample Type	Matrix	No. of Containers	ANALYSIS REQUESTED ²¹			PRESERVATIVE ²⁰			Sample Type Key: ²²
		Date	Time					HNO3	Ice	HNO3	N	O-Other	C-Composite	
103228004	M6WC-01	5/16/16	0956	McIntosh AP	G	GW	3	Metals app. III & IV EPA 6020 & EPA 7470	Cl, F, SO4 EPA 300 TDS SM2540C	Radium 226 & 228 Ga Tech	S-Solid SL-Sludge W-Wipo SW-Surface Water GW-Ground Water WW-Waste Water DW-Drinking Water	O-Grab O-Other C-Composite		

LAB USE ONLY: Sample Receipt Information²⁸

Requested by:²⁶ CP Date/Time 5/16/16 1102
 Received by:²⁷ WV Date/Time 5/16/16 1102
 Requested by: WV Date/Time 5/16/16 1602
 Received by: WV Date/Time 5-6-16 1602

4.3°C (60EL-IR-4P) ice, hand, cooler in good condition, no seal
 Sample M6WC-01 collection time different on date/containers and
 outside sample containers, sample will be logged in using the information
 on file.

Sample Receipt Checklist



Client: McIntosh
 Workorder No.: 103228
 Carrier: HAND

of Samples: 6
 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	4.3
COC is present	True	
COC is filled out in ink and is legible	True	Overwrite present on COC without initial and date.
COC is filled out with pertinent information	True	Missing description field.
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 MGWC-01 sample collection time different from metal sample container label versus nutrient sample container label. Sample will be logged in using the information on COC.
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:



PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Laboratory Report

Prepared For:

**Georgia Power
2480 Maner Road
Atlanta, GA 30339**

Attention: Mr. Joju Abraham

Report Number: AZF0761

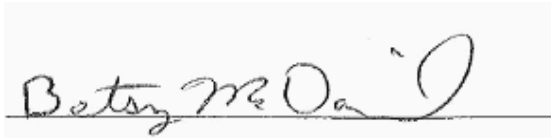
June 28, 2016

Project: CCR Event

Project #: Plant McIntosh

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:



Project Manager

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Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 28, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MGWA-10	AZF0761-01	Ground Water	06/20/16 14:50	06/21/16 14:45
MGWA-5	AZF0761-02	Ground Water	06/20/16 14:45	06/21/16 14:45
MGWA-11	AZF0761-03	Ground Water	06/20/16 16:49	06/21/16 14:45



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 (770) 734-4200 FAX (770) 734-4201

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 28, 2016

Report No.: AZF0761

Project: CCR Event

Client ID: MGWA-10

Lab Number ID: AZF0761-01

Date/Time Sampled: 6/20/2016 2:50:00PM

Date/Time Received: 6/21/2016 2:45:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	80	25	10	mg/L	SM 2540 C		1	06/23/16 15:45	06/23/16 15:45	6060592	JPT
Inorganic Anions											
Chloride	7.0	0.25	0.01	mg/L	EPA 300.0		1	06/24/16 14:31	06/26/16 04:11	6060643	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	06/24/16 14:31	06/26/16 04:11	6060643	RLC
Sulfate	2.5	1.0	0.05	mg/L	EPA 300.0		1	06/24/16 14:31	06/26/16 04:11	6060643	RLC



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Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 28, 2016

Report No.: AZF0761

Project: CCR Event

Client ID: MGWA-5

Lab Number ID: AZF0761-02

Date/Time Sampled: 6/20/2016 2:45:00PM

Date/Time Received: 6/21/2016 2:45:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	156	25	10	mg/L	SM 2540 C		1	06/23/16 15:45	06/23/16 15:45	6060592	JPT
Inorganic Anions											
Chloride	5.9	0.25	0.01	mg/L	EPA 300.0		1	06/24/16 14:31	06/26/16 04:32	6060643	RLC
Fluoride	0.05	0.30	0.02	mg/L	EPA 300.0	J	1	06/24/16 14:31	06/26/16 04:32	6060643	RLC
Sulfate	7.7	1.0	0.05	mg/L	EPA 300.0		1	06/24/16 14:31	06/26/16 04:32	6060643	RLC



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Georgia Power
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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 28, 2016

Report No.: AZF0761

Project: CCR Event

Client ID: MGWA-11

Lab Number ID: AZF0761-03

Date/Time Sampled: 6/20/2016 4:49:00PM

Date/Time Received: 6/21/2016 2:45:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	188	25	10	mg/L	SM 2540 C		1	06/23/16 15:45	06/23/16 15:45	6060592	JPT
Inorganic Anions											
Chloride	4.3	0.25	0.01	mg/L	EPA 300.0		1	06/24/16 14:31	06/26/16 06:17	6060643	RLC
Fluoride	0.06	0.30	0.02	mg/L	EPA 300.0	J	1	06/24/16 14:31	06/26/16 06:17	6060643	RLC
Sulfate	1.0	1.0	0.05	mg/L	EPA 300.0		1	06/24/16 14:31	06/26/16 06:17	6060643	RLC



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 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 28, 2016

Report No.: AZF0761

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6060592 - SM 2540 C											
Blank (6060592-BLK1)						Prepared & Analyzed: 06/23/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6060592-BS1)						Prepared & Analyzed: 06/23/16					
Total Dissolved Solids	404	25	10	mg/L	400.00		101	84-108			
Duplicate (6060592-DUP1)						Source: AZF0760-01 Prepared & Analyzed: 06/23/16					
Total Dissolved Solids	77	25	10	mg/L		78			1	10	



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Attention: Mr. Joju Abraham

June 28, 2016

Report No.: AZF0761

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6060643 - EPA 300.0											
Blank (6060643-BLK1)						Prepared: 06/24/16 Analyzed: 06/26/16					
Chloride	ND	0.25	0.01	mg/L							
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
LCS (6060643-BS1)						Prepared: 06/24/16 Analyzed: 06/26/16					
Chloride	10.0	0.25	0.01	mg/L	10.010		100	90-110			
Fluoride	10.5	0.30	0.02	mg/L	10.010		105	90-110			
Sulfate	10.5	1.0	0.05	mg/L	10.010		105	90-110			
Matrix Spike (6060643-MS1)						Source: AZF0760-04 Prepared: 06/24/16 Analyzed: 06/26/16					
Chloride	13.1	0.25	0.01	mg/L	10.010	3.09	100	90-110			
Fluoride	10.5	0.30	0.02	mg/L	10.010	0.04	104	90-110			
Sulfate	12.4	1.0	0.05	mg/L	10.010	2.36	100	90-110			
Matrix Spike Dup (6060643-MSD1)						Source: AZF0760-04 Prepared: 06/24/16 Analyzed: 06/26/16					
Chloride	13.2	0.25	0.01	mg/L	10.010	3.09	101	90-110	0.4	15	
Fluoride	10.6	0.30	0.02	mg/L	10.010	0.04	105	90-110	0.9	15	
Sulfate	12.5	1.0	0.05	mg/L	10.010	2.36	101	90-110	0.5	15	



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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 28, 2016

Laboratory Certifications

Code	Description	Number	Expires
GADW	Georgia DW Inorganics Eff: 07/01/2015	812	06/30/2016
LA	Louisiana	02069	06/30/2016
NC	North Carolina	381	12/31/2016
NELAC	FL DOH (Non-Pot. Water, Solids) Eff.: 07/01/2015	E87315	06/30/2016
NELDW	FL DOH NELAC (Drinking Water) Eff: 07/01/2015	E87315	06/30/2016
SC	South Carolina	98011001	06/30/2016
TX	Texas	T104704397-08-TX	03/31/2017
VA	Virginia	1340	12/14/2016



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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 28, 2016

Legend

Definition of Laboratory Terms

ND - Not Detected at levels equal to or greater than the MDL

BRL - Not Detected at levels equal to or greater than the RL

RL - Reporting Limit **MDL** - Method Detection Limit

SOP - Method run per Pace Standard Operating Procedure

CFU - Colony Forming Units

DF - Dilution Factor **TIC** - Tentatively Identified Compound

* - Analyte not included in the NELAC list of certified analytes.

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrosodiphenylamine. Pace is not NELAC certified for N-Nitrosodiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Definition of Qualifiers

J Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).

Note: Unless otherwise noted, all results are reported on an as received basis.



PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta, GA, 30339

Attention: Mr. Joju Abraham

June 28, 2016

LAB USE ONLY: ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD. Includes fields for Work Order No. (A7E074), Sample Shipment Date (4/20/16), Sample Received Date, and a table for Sample Description, Collection Date/Time, and Matrix. Includes handwritten notes and signatures.



PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

LOG-IN CHECKLIST

Printed: 6/28/2016 5:45:22PM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 06/21/16 14:45

Work Order: AZF0761

Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 3

#Containers: 9

Minimum Temp(C): 1.0

Maximum Temp(C): 1.0

Custody Seal(s) Used: Yes

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	YES
Custody seal Intact	YES
Temperature in Compliance	YES
Sufficient Sample Volume for Analysis	YES
Zero Headspace Maintained for VOA Analyses	YES
Samples labeled preserved (If Applicable)	YES
Samples received within Allowable Hold Times	YES
Samples Received on Ice	YES
Preservation Confirmed	YES

Comments:

June 27, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: PLANT MCINTOSH
Pace Project No.: 92302386

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on June 22, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,



Melissa Sybert
melissa.sybert@pacelabs.com
Project Manager

Enclosures

cc: Betsy McDaniel, Pace Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: PLANT MCINTOSH

Pace Project No.: 92302386

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: PLANT MCINTOSH

Pace Project No.: 92302386

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92302386001	MGWA-10	Water	06/20/16 14:50	06/22/16 10:00
92302386002	MGWA-5	Water	06/20/16 14:45	06/22/16 10:00
92302386003	MGWA-11	Water	06/20/16 16:49	06/22/16 10:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: PLANT MCINTOSH

Pace Project No.: 92302386

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92302386001	MGWA-10	EPA 6020B	CDF	14	PASI-A
		EPA 7470	SER	1	PASI-A
92302386002	MGWA-5	EPA 6020B	CDF	14	PASI-A
		EPA 7470	SER	1	PASI-A
92302386003	MGWA-11	EPA 6020B	CDF	14	PASI-A
		EPA 7470	SER	1	PASI-A

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: PLANT MCINTOSH

Pace Project No.: 92302386

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92302386001	MGWA-10					
EPA 6020B	Arsenic	0.00036J	mg/L	0.0050	06/24/16 20:13	
EPA 6020B	Barium	0.033	mg/L	0.010	06/24/16 20:13	
EPA 6020B	Beryllium	0.000033J	mg/L	0.0030	06/24/16 20:13	
EPA 6020B	Boron	0.011J	mg/L	0.10	06/24/16 20:13	B
EPA 6020B	Calcium	8.1	mg/L	0.50	06/24/16 20:13	
EPA 6020B	Chromium	0.0026J	mg/L	0.010	06/24/16 20:13	
EPA 6020B	Cobalt	0.00018J	mg/L	0.010	06/24/16 20:13	
EPA 6020B	Lithium	0.0071J	mg/L	0.050	06/24/16 20:13	
EPA 6020B	Molybdenum	0.00031J	mg/L	0.010	06/24/16 20:13	
92302386002	MGWA-5					
EPA 6020B	Arsenic	0.00014J	mg/L	0.0050	06/24/16 20:16	
EPA 6020B	Barium	0.031	mg/L	0.010	06/24/16 20:16	
EPA 6020B	Boron	0.013J	mg/L	0.10	06/24/16 20:16	B
EPA 6020B	Calcium	29.4	mg/L	0.50	06/24/16 20:16	
EPA 6020B	Chromium	0.00024J	mg/L	0.010	06/24/16 20:16	
EPA 6020B	Cobalt	0.000012J	mg/L	0.010	06/24/16 20:16	
EPA 6020B	Lithium	0.0065J	mg/L	0.050	06/24/16 20:16	B
EPA 6020B	Molybdenum	0.0014J	mg/L	0.010	06/24/16 20:16	
92302386003	MGWA-11					
EPA 6020B	Arsenic	0.0030J	mg/L	0.0050	06/24/16 20:20	
EPA 6020B	Barium	0.091	mg/L	0.010	06/24/16 20:20	
EPA 6020B	Boron	0.017J	mg/L	0.10	06/24/16 20:20	
EPA 6020B	Calcium	35.5	mg/L	0.50	06/24/16 20:20	
EPA 6020B	Chromium	0.00066J	mg/L	0.010	06/24/16 20:20	
EPA 6020B	Cobalt	0.000039J	mg/L	0.010	06/24/16 20:20	
EPA 6020B	Lead	0.000087J	mg/L	0.0050	06/24/16 20:20	
EPA 6020B	Lithium	0.014J	mg/L	0.050	06/24/16 20:20	
EPA 6020B	Molybdenum	0.0052J	mg/L	0.010	06/24/16 20:20	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: PLANT MCINTOSH

Pace Project No.: 92302386

Sample: MGWA-10 **Lab ID: 92302386001** Collected: 06/20/16 14:50 Received: 06/22/16 10:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020 MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Antimony	ND	mg/L	0.0030	0.00010	1	06/23/16 18:10	06/24/16 20:13	7440-36-0	
Arsenic	0.00036J	mg/L	0.0050	0.000050	1	06/23/16 18:10	06/24/16 20:13	7440-38-2	
Barium	0.033	mg/L	0.010	0.00011	1	06/23/16 18:10	06/24/16 20:13	7440-39-3	
Beryllium	0.000033J	mg/L	0.0030	0.000020	1	06/23/16 18:10	06/24/16 20:13	7440-41-7	
Boron	0.011J	mg/L	0.10	0.00057	1	06/23/16 18:10	06/24/16 20:13	7440-42-8	B
Cadmium	ND	mg/L	0.0010	0.000060	1	06/23/16 18:10	06/24/16 20:13	7440-43-9	
Calcium	8.1	mg/L	0.50	0.10	1	06/23/16 18:10	06/24/16 20:13	7440-70-2	
Chromium	0.0026J	mg/L	0.010	0.00010	1	06/23/16 18:10	06/24/16 20:13	7440-47-3	
Cobalt	0.00018J	mg/L	0.010	0.000010	1	06/23/16 18:10	06/24/16 20:13	7440-48-4	
Lead	ND	mg/L	0.0050	0.000080	1	06/23/16 18:10	06/24/16 20:13	7439-92-1	
Lithium	0.0071J	mg/L	0.050	0.000070	1	06/23/16 18:10	06/24/16 20:13	7439-93-2	
Molybdenum	0.00031J	mg/L	0.010	0.00011	1	06/23/16 18:10	06/24/16 20:13	7439-98-7	
Selenium	ND	mg/L	0.010	0.00032	1	06/23/16 18:10	06/24/16 20:13	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000020	1	06/23/16 18:10	06/24/16 20:13	7440-28-0	
7470 Mercury Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury	ND	mg/L	0.00050	0.00010	1	06/24/16 16:38	06/27/16 01:26	7439-97-6	

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ANALYTICAL RESULTS

Project: PLANT MCINTOSH

Pace Project No.: 92302386

Sample: MGWA-5 **Lab ID: 92302386002** Collected: 06/20/16 14:45 Received: 06/22/16 10:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3010A							
Antimony	ND	mg/L	0.0030	0.00010	1	06/23/16 18:10	06/24/16 20:16	7440-36-0	
Arsenic	0.00014J	mg/L	0.0050	0.000050	1	06/23/16 18:10	06/24/16 20:16	7440-38-2	
Barium	0.031	mg/L	0.010	0.00011	1	06/23/16 18:10	06/24/16 20:16	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000020	1	06/23/16 18:10	06/24/16 20:16	7440-41-7	
Boron	0.013J	mg/L	0.10	0.00057	1	06/23/16 18:10	06/24/16 20:16	7440-42-8	B
Cadmium	ND	mg/L	0.0010	0.000060	1	06/23/16 18:10	06/24/16 20:16	7440-43-9	
Calcium	29.4	mg/L	0.50	0.10	1	06/23/16 18:10	06/24/16 20:16	7440-70-2	
Chromium	0.00024J	mg/L	0.010	0.00010	1	06/23/16 18:10	06/24/16 20:16	7440-47-3	
Cobalt	0.000012J	mg/L	0.010	0.000010	1	06/23/16 18:10	06/24/16 20:16	7440-48-4	
Lead	ND	mg/L	0.0050	0.000080	1	06/23/16 18:10	06/24/16 20:16	7439-92-1	
Lithium	0.0065J	mg/L	0.050	0.000070	1	06/23/16 18:10	06/24/16 20:16	7439-93-2	B
Molybdenum	0.0014J	mg/L	0.010	0.00011	1	06/23/16 18:10	06/24/16 20:16	7439-98-7	
Selenium	ND	mg/L	0.010	0.00032	1	06/23/16 18:10	06/24/16 20:16	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000020	1	06/23/16 18:10	06/24/16 20:16	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	mg/L	0.00050	0.00010	1	06/24/16 16:38	06/27/16 01:28	7439-97-6	

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ANALYTICAL RESULTS

Project: PLANT MCINTOSH

Pace Project No.: 92302386

Sample: MGWA-11 **Lab ID: 92302386003** Collected: 06/20/16 16:49 Received: 06/22/16 10:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Antimony	ND	mg/L	0.0030	0.00010	1	06/23/16 18:10	06/24/16 20:20	7440-36-0	
Arsenic	0.0030J	mg/L	0.0050	0.000050	1	06/23/16 18:10	06/24/16 20:20	7440-38-2	
Barium	0.091	mg/L	0.010	0.00011	1	06/23/16 18:10	06/24/16 20:20	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000020	1	06/23/16 18:10	06/24/16 20:20	7440-41-7	
Boron	0.017J	mg/L	0.10	0.00057	1	06/23/16 18:10	06/24/16 20:20	7440-42-8	
Cadmium	ND	mg/L	0.0010	0.000060	1	06/23/16 18:10	06/24/16 20:20	7440-43-9	
Calcium	35.5	mg/L	0.50	0.10	1	06/23/16 18:10	06/24/16 20:20	7440-70-2	
Chromium	0.00066J	mg/L	0.010	0.00010	1	06/23/16 18:10	06/24/16 20:20	7440-47-3	
Cobalt	0.000039J	mg/L	0.010	0.000010	1	06/23/16 18:10	06/24/16 20:20	7440-48-4	
Lead	0.000087J	mg/L	0.0050	0.000080	1	06/23/16 18:10	06/24/16 20:20	7439-92-1	
Lithium	0.014J	mg/L	0.050	0.000070	1	06/23/16 18:10	06/24/16 20:20	7439-93-2	
Molybdenum	0.0052J	mg/L	0.010	0.00011	1	06/23/16 18:10	06/24/16 20:20	7439-98-7	
Selenium	ND	mg/L	0.010	0.00032	1	06/23/16 18:10	06/24/16 20:20	7782-49-2	
Thallium	ND	mg/L	0.0010	0.000020	1	06/23/16 18:10	06/24/16 20:20	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Mercury	ND	mg/L	0.00050	0.00010	1	06/24/16 16:38	06/27/16 01:30	7439-97-6	

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QUALITY CONTROL DATA

Project: PLANT MCINTOSH

Pace Project No.: 92302386

QC Batch: MERP/9677 Analysis Method: EPA 7470
 QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
 Associated Lab Samples: 92302386001, 92302386002, 92302386003

METHOD BLANK: 1762788 Matrix: Water

Associated Lab Samples: 92302386001, 92302386002, 92302386003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00010	06/27/16 00:38	

LABORATORY CONTROL SAMPLE: 1762789

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.0025	0.0026	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1762790 1762791

Parameter	Units	92302105001 Result	MS		MSD		% Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Conc.	Result	Result						
Mercury	mg/L	ND	.0025	.0025	0.0020	0.0020	79	81	75-125	2	25	

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QUALITY CONTROL DATA

Project: PLANT MCINTOSH
Pace Project No.: 92302386

QC Batch: MPRP/22172 Analysis Method: EPA 6020B
QC Batch Method: EPA 3010A Analysis Description: 6020 MET
Associated Lab Samples: 92302386001, 92302386002, 92302386003

METHOD BLANK: 1763655 Matrix: Water
Associated Lab Samples: 92302386001, 92302386002, 92302386003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00010	06/24/16 19:22	
Arsenic	mg/L	ND	0.0050	0.000050	06/24/16 19:22	
Barium	mg/L	ND	0.010	0.00011	06/24/16 19:22	
Beryllium	mg/L	ND	0.0030	0.000020	06/24/16 19:22	
Boron	mg/L	0.0013J	0.10	0.00057	06/24/16 19:22	
Cadmium	mg/L	ND	0.0010	0.000060	06/24/16 19:22	
Calcium	mg/L	ND	0.50	0.10	06/24/16 19:22	
Chromium	mg/L	ND	0.010	0.00010	06/24/16 19:22	
Cobalt	mg/L	ND	0.010	0.000010	06/24/16 19:22	
Lead	mg/L	ND	0.0050	0.000080	06/24/16 19:22	
Lithium	mg/L	0.00066J	0.050	0.000070	06/24/16 19:22	
Molybdenum	mg/L	ND	0.010	0.00011	06/24/16 19:22	
Selenium	mg/L	ND	0.010	0.00032	06/24/16 19:22	
Thallium	mg/L	ND	0.0010	0.000020	06/24/16 19:22	

LABORATORY CONTROL SAMPLE: 1763656

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	.1	0.094	94	80-120	
Arsenic	mg/L	.1	0.093	93	80-120	
Barium	mg/L	.1	0.097	97	80-120	
Beryllium	mg/L	.1	0.089	89	80-120	
Boron	mg/L	.1	0.096J	96	80-120	
Cadmium	mg/L	.1	0.093	93	80-120	
Calcium	mg/L	1.2	1.2	98	80-120	
Chromium	mg/L	.1	0.095	95	80-120	
Cobalt	mg/L	.1	0.096	96	80-120	
Lead	mg/L	.1	0.095	95	80-120	
Lithium	mg/L	.1	0.088	88	80-120	
Molybdenum	mg/L	.1	0.098	98	80-120	
Selenium	mg/L	.1	0.093	93	80-120	
Thallium	mg/L	.1	0.096	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1763657 1763658

Parameter	Units	92302382001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	0.00020J	.1	.1	0.093	0.093	93	93	75-125	0	20	

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QUALITY CONTROL DATA

Project: PLANT MCINTOSH

Pace Project No.: 92302386

Parameter	Units	1763657		1763658		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Arsenic	mg/L	ND	.1	.1	0.093	0.093	93	93	75-125	1	20		
Barium	mg/L	0.014	.1	.1	0.11	0.11	96	97	75-125	1	20		
Beryllium	mg/L	0.000058J	.1	.1	0.089	0.090	89	90	75-125	2	20		
Boron	mg/L	0.0015J	.1	.1	0.10	0.098J	101	97	75-125	4	20		
Cadmium	mg/L	ND	.1	.1	0.092	0.093	92	93	75-125	0	20		
Calcium	mg/L	7.7	1.2	1.2	9.1	9.4	107	134	75-125	4	20	M1	
Chromium	mg/L	0.0076J	.1	.1	0.10	0.10	95	96	75-125	1	20		
Cobalt	mg/L	0.00010J	.1	.1	0.096	0.097	96	97	75-125	1	20		
Lead	mg/L	ND	.1	.1	0.093	0.094	93	94	75-125	1	20		
Lithium	mg/L	0.00056J	.1	.1	0.090	0.088	90	88	75-125	2	20		
Molybdenum	mg/L	ND	.1	.1	0.098	0.098	98	98	75-125	0	20		
Selenium	mg/L	ND	.1	.1	0.092	0.093	92	93	75-125	1	20		
Thallium	mg/L	ND	.1	.1	0.096	0.096	96	96	75-125	0	20		

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QUALIFIERS

Project: PLANT MCINTOSH

Pace Project No.: 92302386

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether, Styrene, and Vinyl chloride.

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-A Pace Analytical Services - Asheville

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT MCINTOSH

Pace Project No.: 92302386

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92302386001	MGWA-10	EPA 3010A	MPRP/22172	EPA 6020B	ICPM/1341
92302386002	MGWA-5	EPA 3010A	MPRP/22172	EPA 6020B	ICPM/1341
92302386003	MGWA-11	EPA 3010A	MPRP/22172	EPA 6020B	ICPM/1341
92302386001	MGWA-10	EPA 7470	MERP/9677	EPA 7470	MERC/9320
92302386002	MGWA-5	EPA 7470	MERP/9677	EPA 7470	MERC/9320
92302386003	MGWA-11	EPA 7470	MERP/9677	EPA 7470	MERC/9320

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Document Name:
Sample Condition Upon Receipt (SCUR)
 Document No.:
F-ASV-CS-003-Rev.20

Document Revised: May 24, 2016
 Page 1 of 2
 Issuing Authority:
 Pace Asheville Quality Office

Sample Condition Upon Receipt

Client Name:
Georgia Power

Project #:

WO# : 92302386



Courier: Commercial Fed Ex UPS USPS Client Pace Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 6/22/16

Packing Material: Bubble Wrap Bubble Bags None Other: _____

Thermometer: IR Gun #5 SN:15527198 Type of Ice: Wet Blue None Samples on ice, cooling process has begun
 Correction Factor: 0.0°C Cooler Temp Corrected (°C): 3.7 Biological Tissue Frozen? Yes No N/A

Temp should be above freezing to 6°C
 USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?
 Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8. Note if sediment is visible in the dissolved container
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>GW</u>	
All containers needing acid/base preservation have been checked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10. HNO3 pH<2
All containers needing preservation are found to be in compliance with EPA recommendation? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	HCl pH<2
(HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	H2SO4 pH<2
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC,LLHg	NaOH pH>12
	NaOH/ZnOAc pH>9
Samples checked for dechlorination? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____	

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: _____ Date/Time: _____
 Comments/Sample Discrepancy: _____

Project Manager SCURF Review: MS Date: 6/22/16

Project Manager SRF Review: MS Date: 6/22/16

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina BEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)

LAB USE ONLY

Work Order No. 9230346
 Reviewed By: _____
 Page 1 of 1

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

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

Custody Seal ID: 20160620 - 01

Sample Shipment Date:⁸ 6/20/16
 Sample Received Date:⁹ _____
 ¹¹ Standard Turnaround Time

Sampled By:¹⁰ Will Virgo (MV)
Myles Roberts (MRS)
Amanda Gormer (AG)

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

LAB USE ONLY		LAB ID		Sample Number ¹⁴		Collection ¹⁵		Sample Description ¹⁶																															
LAB USE ONLY	LAB ID	Sample Number ¹⁴	Collection ¹⁵	Date	Time	Sample Type	Matrix	No. of Containers	Metals app. III & IV EPA 6020 & EPA 7470	CI, F, SO4 EPA 300 TDS SM2540C	Radiation 220 & 226 @ 1 ft	HNO3 N	Ice I	HNO3 HNO3 N N	PRESERVATIVE ²⁰	ANALYSIS REQUESTED ²¹	Sample Type Key: ²² G-Grab C-Other C-Composite	Matrix Key: ²³ S-Solid SL-Sludge W-Wipe SW-Surface Water GW-Ground Water WW-Waste Water DW-Drinking Water	Preservative Key: ²⁴ H-Hydrochloric Acid H-Nitric Acid S-Sulfuric Acid SH-Sodium Hydroxide SB-Sodium Bisulfate P-Phosphoric Acid ST-Sodium Thiosulfate I-Ice U-Unpreserved	LAB USE ONLY ²⁵ Comments																			
		MGWA-10	6/20/16	1450		GW	3	3	✓	✓																													
		MGWA-5	6/20/16	1445		GW	3	3	✓	✓																													
		MGWA-11	6/20/16	1449		GW	3	3	✓	✓																													

LAB USE ONLY: Sample Receipt Information ²⁸

Relinquished by: ²⁶	Date/Time
Received by: ²⁷	Date/Time <u>6-21-16 @ 1020</u>
Relinquished by: ²⁸	Date/Time <u>6-21-16 @ 1407</u>
Received by: ²⁹	Date/Time <u>6-22-16 1000</u>



PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Laboratory Report

Prepared For:

**Georgia Power
2480 Maner Road
Atlanta, GA 30339**

Attention: Mr. Joju Abraham

Report Number: AZF0829

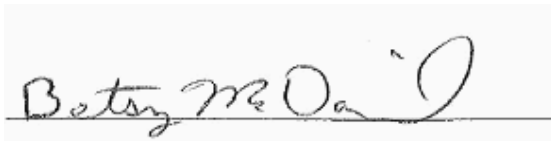
June 29, 2016

Project: CCR Event

Project #: Plant McIntosh

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:



Project Manager

This report may not be reproduced, except in full, without written approval from Pace Analytical Services, Inc.
All test results relate only to the samples analyzed.



PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 29, 2016

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MGWA-6	AZF0829-01	Ground Water	06/21/16 08:48	06/22/16 15:15
Dup-1	AZF0829-02	Ground Water	06/21/16 00:00	06/22/16 15:15
MGWC-12	AZF0829-03	Ground Water	06/21/16 12:56	06/22/16 15:15
MGWC-3	AZF0829-04	Ground Water	06/21/16 11:00	06/22/16 15:15
FB-1	AZF0829-05	DI Water	06/21/16 15:45	06/22/16 15:15
FERB-1	AZF0829-06	DI Water	06/21/16 15:50	06/22/16 15:15
MGWC-7	AZF0829-07	Ground Water	06/21/16 09:20	06/22/16 15:15
MGWC-2	AZF0829-08	Ground Water	06/21/16 11:25	06/22/16 15:15
MGWC-1	AZF0829-09	Ground Water	06/21/16 12:30	06/22/16 15:15
MGWC-8	AZF0829-10	Ground Water	06/21/16 08:55	06/22/16 15:15



PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
 110 Technology Parkway, Peachtree Corners, GA 30092
 (770) 734-4200 FAX (770) 734-4201

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 29, 2016

Report No.: AZF0829

Project: CCR Event

Client ID: MGWA-6

Lab Number ID: AZF0829-01

Date/Time Sampled: 6/21/2016 8:48:00AM

Date/Time Received: 6/22/2016 3:15:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	303	25	10	mg/L	SM 2540 C		1	06/23/16 15:45	06/23/16 15:45	6060592	JPT
Inorganic Anions											
Chloride	9.2	0.25	0.01	mg/L	EPA 300.0	B-01	1	06/24/16 14:32	06/25/16 18:12	6060644	RLC
Fluoride	0.08	0.30	0.02	mg/L	EPA 300.0	J	1	06/24/16 14:32	06/25/16 18:12	6060644	RLC
Sulfate	17	1.0	0.05	mg/L	EPA 300.0		1	06/24/16 14:32	06/25/16 18:12	6060644	RLC
Metals, Total											
Antimony	0.0017	0.0030	0.0002	mg/L	EPA 6020B	B-01, J	1	06/24/16 07:50	06/24/16 15:02	6060619	CSW
Arsenic	0.0352	0.0050	0.0007	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:02	6060619	CSW
Barium	0.0539	0.0100	0.0003	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:02	6060619	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:02	6060619	CSW
Boron	0.124	0.100	0.0044	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:02	6060619	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:02	6060619	CSW
Calcium	91.2	25.0	0.628	mg/L	EPA 6020B		50	06/24/16 07:50	06/25/16 12:50	6060619	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:02	6060619	CSW
Cobalt	0.0003	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:02	6060619	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:02	6060619	CSW
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:02	6060619	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:02	6060619	CSW
Thallium	0.0001	0.0010	0.00006	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:02	6060619	CSW
Lithium	ND	0.0500	0.0012	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:02	6060619	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	06/23/16 14:00	06/24/16 14:08	6060586	CSW



PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
 110 Technology Parkway, Peachtree Corners, GA 30092
 (770) 734-4200 FAX (770) 734-4201

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 29, 2016

Report No.: AZF0829

Project: CCR Event

Client ID: Dup-1

Lab Number ID: AZF0829-02

Date/Time Sampled: 6/21/2016 12:00:00AM

Date/Time Received: 6/22/2016 3:15:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	306	25	10	mg/L	SM 2540 C		1	06/24/16 18:20	06/24/16 18:20	6060630	JPT
Inorganic Anions											
Chloride	9.1	0.25	0.01	mg/L	EPA 300.0	B-01	1	06/24/16 14:32	06/25/16 18:33	6060644	RLC
Fluoride	0.24	0.30	0.02	mg/L	EPA 300.0	J	1	06/24/16 14:32	06/25/16 18:33	6060644	RLC
Sulfate	17	1.0	0.05	mg/L	EPA 300.0		1	06/24/16 14:32	06/25/16 18:33	6060644	RLC
Metals, Total											
Antimony	0.0006	0.0030	0.0002	mg/L	EPA 6020B	B-01, J	1	06/24/16 07:50	06/24/16 15:07	6060619	CSW
Arsenic	0.0361	0.0050	0.0007	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:07	6060619	CSW
Barium	0.0539	0.0100	0.0003	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:07	6060619	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:07	6060619	CSW
Boron	0.119	0.100	0.0044	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:07	6060619	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:07	6060619	CSW
Calcium	90.7	25.0	0.628	mg/L	EPA 6020B		50	06/24/16 07:50	06/25/16 12:55	6060619	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:07	6060619	CSW
Cobalt	0.0003	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:07	6060619	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:07	6060619	CSW
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:07	6060619	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:07	6060619	CSW
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:07	6060619	CSW
Lithium	ND	0.0500	0.0012	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:07	6060619	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	06/23/16 14:00	06/24/16 14:10	6060586	CSW



PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
 110 Technology Parkway, Peachtree Corners, GA 30092
 (770) 734-4200 FAX (770) 734-4201

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 29, 2016

Report No.: AZF0829

Project: CCR Event

Client ID: MGWC-12

Lab Number ID: AZF0829-03

Date/Time Sampled: 6/21/2016 12:56:00PM

Date/Time Received: 6/22/2016 3:15:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	177	25	10	mg/L	SM 2540 C		1	06/24/16 18:20	06/24/16 18:20	6060630	JPT
Inorganic Anions											
Chloride	4.4	0.25	0.01	mg/L	EPA 300.0	B-01	1	06/24/16 14:32	06/25/16 18:53	6060644	RLC
Fluoride	0.14	0.30	0.02	mg/L	EPA 300.0	J	1	06/24/16 14:32	06/25/16 18:53	6060644	RLC
Sulfate	4.0	1.0	0.05	mg/L	EPA 300.0		1	06/24/16 14:32	06/25/16 18:53	6060644	RLC
Metals, Total											
Antimony	0.0004	0.0030	0.0002	mg/L	EPA 6020B	B-01, J	1	06/24/16 07:50	06/24/16 15:12	6060619	CSW
Arsenic	0.0015	0.0050	0.0007	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:12	6060619	CSW
Barium	0.0439	0.0100	0.0003	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:12	6060619	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:12	6060619	CSW
Boron	0.0201	0.100	0.0044	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:12	6060619	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:12	6060619	CSW
Calcium	25.5	5.00	0.126	mg/L	EPA 6020B		10	06/24/16 07:50	06/25/16 13:00	6060619	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:12	6060619	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:12	6060619	CSW
Lead	0.0001	0.0050	0.00008	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:12	6060619	CSW
Molybdenum	0.0020	0.0100	0.0005	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:12	6060619	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:12	6060619	CSW
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:12	6060619	CSW
Lithium	0.0112	0.0500	0.0012	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:12	6060619	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	06/23/16 14:00	06/24/16 14:13	6060586	CSW



PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
 110 Technology Parkway, Peachtree Corners, GA 30092
 (770) 734-4200 FAX (770) 734-4201

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 29, 2016

Report No.: AZF0829

Project: CCR Event

Client ID: MGWC-3

Lab Number ID: AZF0829-04

Date/Time Sampled: 6/21/2016 11:00:00AM

Date/Time Received: 6/22/2016 3:15:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	392	25	10	mg/L	SM 2540 C		1	06/24/16 18:20	06/24/16 18:20	6060630	JPT
Inorganic Anions											
Chloride	13	0.25	0.01	mg/L	EPA 300.0	B-01	1	06/24/16 14:32	06/25/16 19:55	6060644	RLC
Fluoride	0.23	0.30	0.02	mg/L	EPA 300.0	J	1	06/24/16 14:32	06/25/16 19:55	6060644	RLC
Sulfate	95	5.0	0.26	mg/L	EPA 300.0		5	06/24/16 14:32	06/27/16 00:53	6060644	RLC
Metals, Total											
Antimony	0.0003	0.0030	0.0002	mg/L	EPA 6020B	B-01, J	1	06/24/16 07:50	06/24/16 15:17	6060619	CSW
Arsenic	0.0016	0.0050	0.0007	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:17	6060619	CSW
Barium	0.174	0.0100	0.0003	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:17	6060619	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:17	6060619	CSW
Boron	0.792	0.100	0.0044	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:17	6060619	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:17	6060619	CSW
Calcium	99.7	25.0	0.628	mg/L	EPA 6020B		50	06/24/16 07:50	06/25/16 13:05	6060619	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:17	6060619	CSW
Cobalt	0.0006	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:17	6060619	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:17	6060619	CSW
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:17	6060619	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:17	6060619	CSW
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:17	6060619	CSW
Lithium	0.0103	0.0500	0.0012	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:17	6060619	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	06/23/16 14:00	06/24/16 14:15	6060586	CSW



PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
 110 Technology Parkway, Peachtree Corners, GA 30092
 (770) 734-4200 FAX (770) 734-4201

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 29, 2016

Report No.: AZF0829

Project: CCR Event

Client ID: FB-1

Lab Number ID: AZF0829-05

Date/Time Sampled: 6/21/2016 3:45:00PM

Date/Time Received: 6/22/2016 3:15:00PM

Matrix: DI Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	06/24/16 18:20	06/24/16 18:20	6060630	JPT
Inorganic Anions											
Chloride	ND	0.25	0.01	mg/L	EPA 300.0		1	06/24/16 14:32	06/25/16 20:16	6060644	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	06/24/16 14:32	06/25/16 20:16	6060644	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	06/24/16 14:32	06/25/16 20:16	6060644	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:22	6060619	CSW
Arsenic	ND	0.0050	0.0007	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:22	6060619	CSW
Barium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:22	6060619	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:22	6060619	CSW
Boron	ND	0.100	0.0044	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:22	6060619	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:22	6060619	CSW
Calcium	0.0231	0.500	0.0126	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:22	6060619	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:22	6060619	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:22	6060619	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:22	6060619	CSW
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:22	6060619	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:22	6060619	CSW
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:22	6060619	CSW
Lithium	ND	0.0500	0.0012	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:22	6060619	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	06/23/16 14:00	06/24/16 14:17	6060586	CSW



PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
 110 Technology Parkway, Peachtree Corners, GA 30092
 (770) 734-4200 FAX (770) 734-4201

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 29, 2016

Report No.: AZF0829

Project: CCR Event

Client ID: FERB-1

Lab Number ID: AZF0829-06

Date/Time Sampled: 6/21/2016 3:50:00PM

Date/Time Received: 6/22/2016 3:15:00PM

Matrix: DI Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	ND	25	10	mg/L	SM 2540 C		1	06/24/16 18:20	06/24/16 18:20	6060630	JPT
Inorganic Anions											
Chloride	0.02	0.25	0.01	mg/L	EPA 300.0	B-01, J	1	06/24/16 14:32	06/25/16 20:37	6060644	RLC
Fluoride	ND	0.30	0.02	mg/L	EPA 300.0		1	06/24/16 14:32	06/25/16 20:37	6060644	RLC
Sulfate	ND	1.0	0.05	mg/L	EPA 300.0		1	06/24/16 14:32	06/25/16 20:37	6060644	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:40	6060619	CSW
Arsenic	ND	0.0050	0.0007	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:40	6060619	CSW
Barium	ND	0.0100	0.0003	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:40	6060619	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:40	6060619	CSW
Boron	ND	0.100	0.0044	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:40	6060619	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:40	6060619	CSW
Calcium	0.0184	0.500	0.0126	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:40	6060619	CSW
Chromium	0.0008	0.0100	0.0004	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:40	6060619	CSW
Cobalt	ND	0.0100	0.0003	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:40	6060619	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:40	6060619	CSW
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:40	6060619	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:40	6060619	CSW
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:40	6060619	CSW
Lithium	ND	0.0500	0.0012	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:40	6060619	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	06/23/16 14:00	06/24/16 14:26	6060586	CSW



PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
 110 Technology Parkway, Peachtree Corners, GA 30092
 (770) 734-4200 FAX (770) 734-4201

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 29, 2016

Report No.: AZF0829

Project: CCR Event

Client ID: MGWC-7

Lab Number ID: AZF0829-07

Date/Time Sampled: 6/21/2016 9:20:00AM

Date/Time Received: 6/22/2016 3:15:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	356	25	10	mg/L	SM 2540 C		1	06/24/16 18:20	06/24/16 18:20	6060630	JPT
Inorganic Anions											
Chloride	13	0.25	0.01	mg/L	EPA 300.0	B-01	1	06/24/16 14:32	06/25/16 20:57	6060644	RLC
Fluoride	0.49	0.30	0.02	mg/L	EPA 300.0		1	06/24/16 14:32	06/25/16 20:57	6060644	RLC
Sulfate	170	5.0	0.26	mg/L	EPA 300.0		5	06/24/16 14:32	06/27/16 01:14	6060644	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:45	6060619	CSW
Arsenic	0.0009	0.0050	0.0007	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:45	6060619	CSW
Barium	0.0152	0.0100	0.0003	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:45	6060619	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:45	6060619	CSW
Boron	1.15	0.100	0.0044	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:45	6060619	CSW
Cadmium	ND	0.0010	0.0001	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:45	6060619	CSW
Calcium	52.8	25.0	0.628	mg/L	EPA 6020B		50	06/24/16 07:50	06/25/16 13:10	6060619	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:45	6060619	CSW
Cobalt	0.0097	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:45	6060619	CSW
Lead	0.0003	0.0050	0.00008	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:45	6060619	CSW
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:45	6060619	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:45	6060619	CSW
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:45	6060619	CSW
Lithium	0.122	0.0500	0.0012	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:45	6060619	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	06/23/16 14:00	06/24/16 14:29	6060586	CSW



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 (770) 734-4200 FAX (770) 734-4201

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 29, 2016

Report No.: AZF0829

Project: CCR Event

Client ID: MGWC-2

Lab Number ID: AZF0829-08

Date/Time Sampled: 6/21/2016 11:25:00AM

Date/Time Received: 6/22/2016 3:15:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	692	25	10	mg/L	SM 2540 C		1	06/24/16 18:20	06/24/16 18:20	6060630	JPT
Inorganic Anions											
Chloride	20	0.25	0.01	mg/L	EPA 300.0	B-01	1	06/24/16 14:32	06/25/16 21:18	6060644	RLC
Fluoride	0.19	0.30	0.02	mg/L	EPA 300.0	J	1	06/24/16 14:32	06/25/16 21:18	6060644	RLC
Sulfate	290	10	0.51	mg/L	EPA 300.0		10	06/24/16 14:32	06/27/16 01:34	6060644	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:50	6060619	CSW
Arsenic	ND	0.0050	0.0007	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:50	6060619	CSW
Barium	0.0613	0.0100	0.0003	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:50	6060619	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:50	6060619	CSW
Boron	3.10	0.100	0.0044	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:50	6060619	CSW
Cadmium	0.0008	0.0010	0.0001	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:50	6060619	CSW
Calcium	119	25.0	0.628	mg/L	EPA 6020B		50	06/24/16 07:50	06/25/16 13:15	6060619	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:50	6060619	CSW
Cobalt	0.0031	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:50	6060619	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:50	6060619	CSW
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:50	6060619	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:50	6060619	CSW
Thallium	ND	0.0010	0.00006	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:50	6060619	CSW
Lithium	0.0047	0.0500	0.0012	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:50	6060619	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	06/23/16 14:00	06/24/16 14:31	6060586	CSW



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Georgia Power
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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 29, 2016

Report No.: AZF0829

Project: CCR Event

Client ID: MGWC-1

Lab Number ID: AZF0829-09

Date/Time Sampled: 6/21/2016 12:30:00PM

Date/Time Received: 6/22/2016 3:15:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	516	25	10	mg/L	SM 2540 C		1	06/24/16 18:20	06/24/16 18:20	6060630	JPT
Inorganic Anions											
Chloride	15	0.25	0.01	mg/L	EPA 300.0	B-01	1	06/24/16 14:32	06/25/16 23:01	6060644	RLC
Fluoride	0.36	0.30	0.02	mg/L	EPA 300.0		1	06/24/16 14:32	06/25/16 23:01	6060644	RLC
Sulfate	210	5.0	0.26	mg/L	EPA 300.0		5	06/24/16 14:32	06/27/16 01:55	6060644	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:55	6060619	CSW
Arsenic	0.0047	0.0050	0.0007	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:55	6060619	CSW
Barium	0.165	0.0100	0.0003	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:55	6060619	CSW
Beryllium	ND	0.0030	0.00009	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:55	6060619	CSW
Boron	1.55	0.100	0.0044	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:55	6060619	CSW
Cadmium	0.0005	0.0010	0.0001	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:55	6060619	CSW
Calcium	119	25.0	0.628	mg/L	EPA 6020B		50	06/24/16 07:50	06/25/16 13:20	6060619	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:55	6060619	CSW
Cobalt	0.0012	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:55	6060619	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:55	6060619	CSW
Molybdenum	0.0020	0.0100	0.0005	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:55	6060619	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 15:55	6060619	CSW
Thallium	0.00009	0.0010	0.00006	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:55	6060619	CSW
Lithium	0.0102	0.0500	0.0012	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 15:55	6060619	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	06/23/16 14:00	06/24/16 14:33	6060586	CSW



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 Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 29, 2016

Report No.: AZF0829

Project: CCR Event

Client ID: MGWC-8

Lab Number ID: AZF0829-10

Date/Time Sampled: 6/21/2016 8:55:00AM

Date/Time Received: 6/22/2016 3:15:00PM

Matrix: Ground Water

Analyte	Result	RL	MDL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
General Chemistry											
Total Dissolved Solids	297	25	10	mg/L	SM 2540 C		1	06/24/16 18:20	06/24/16 18:20	6060630	JPT
Inorganic Anions											
Chloride	10	0.25	0.01	mg/L	EPA 300.0	B-01	1	06/24/16 14:32	06/25/16 23:22	6060644	RLC
Fluoride	0.10	0.30	0.02	mg/L	EPA 300.0	J	1	06/24/16 14:32	06/25/16 23:22	6060644	RLC
Sulfate	160	10	0.51	mg/L	EPA 300.0		10	06/24/16 14:32	06/27/16 02:16	6060644	RLC
Metals, Total											
Antimony	ND	0.0030	0.0002	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 16:00	6060619	CSW
Arsenic	ND	0.0050	0.0007	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 16:00	6060619	CSW
Barium	0.0386	0.0100	0.0003	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 16:00	6060619	CSW
Beryllium	0.0004	0.0030	0.00009	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 16:00	6060619	CSW
Boron	0.862	0.100	0.0044	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 16:00	6060619	CSW
Cadmium	0.0003	0.0010	0.0001	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 16:00	6060619	CSW
Calcium	44.7	5.00	0.126	mg/L	EPA 6020B		10	06/24/16 07:50	06/27/16 13:32	6060619	CSW
Chromium	ND	0.0100	0.0004	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 16:00	6060619	CSW
Cobalt	0.0033	0.0100	0.0003	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 16:00	6060619	CSW
Lead	ND	0.0050	0.00008	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 16:00	6060619	CSW
Molybdenum	ND	0.0100	0.0005	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 16:00	6060619	CSW
Selenium	ND	0.0100	0.0009	mg/L	EPA 6020B		1	06/24/16 07:50	06/24/16 16:00	6060619	CSW
Thallium	0.0001	0.0010	0.00006	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 16:00	6060619	CSW
Lithium	0.0228	0.0500	0.0012	mg/L	EPA 6020B	J	1	06/24/16 07:50	06/24/16 16:00	6060619	CSW
Mercury	ND	0.00050	0.00013	mg/L	EPA 7470A		1	06/23/16 14:00	06/24/16 14:36	6060586	CSW



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Attention: Mr. Joju Abraham

June 29, 2016

Report No.: AZF0829

General Chemistry - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6060592 - SM 2540 C											
Blank (6060592-BLK1)						Prepared & Analyzed: 06/23/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6060592-BS1)						Prepared & Analyzed: 06/23/16					
Total Dissolved Solids	404	25	10	mg/L	400.00		101	84-108			
Duplicate (6060592-DUP1)						Source: AZF0760-01 Prepared & Analyzed: 06/23/16					
Total Dissolved Solids	77	25	10	mg/L		78			1	10	
Batch 6060630 - SM 2540 C											
Blank (6060630-BLK1)						Prepared & Analyzed: 06/24/16					
Total Dissolved Solids	ND	25	10	mg/L							
LCS (6060630-BS1)						Prepared & Analyzed: 06/24/16					
Total Dissolved Solids	380	25	10	mg/L	400.00		95	84-108			
Duplicate (6060630-DUP1)						Source: AZF0829-03 Prepared & Analyzed: 06/24/16					
Total Dissolved Solids	183	25	10	mg/L		177			3	10	



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Report No.: AZF0829

Inorganic Anions - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6060644 - EPA 300.0											
Blank (6060644-BLK1)						Prepared: 06/24/16 Analyzed: 06/25/16					
Chloride	0.02	0.25	0.01	mg/L							J
Fluoride	ND	0.30	0.02	mg/L							
Sulfate	ND	1.0	0.05	mg/L							
LCS (6060644-BS1)						Prepared: 06/24/16 Analyzed: 06/25/16					
Chloride	10.2	0.25	0.01	mg/L	10.010		102	90-110			
Fluoride	10.6	0.30	0.02	mg/L	10.010		106	90-110			
Sulfate	10.5	1.0	0.05	mg/L	10.010		104	90-110			
Matrix Spike (6060644-MS1)						Source: AZF0829-03 Prepared: 06/24/16 Analyzed: 06/25/16					
Chloride	14.1	0.25	0.01	mg/L	10.010	4.40	97	90-110			
Fluoride	10.6	0.30	0.02	mg/L	10.010	0.14	104	90-110			
Sulfate	14.0	1.0	0.05	mg/L	10.010	4.01	100	90-110			
Matrix Spike (6060644-MS2)						Source: AZF0831-05 Prepared: 06/24/16 Analyzed: 06/25/16					
Chloride	11.3	0.25	0.01	mg/L	10.010	1.87	94	90-110			
Fluoride	10.1	0.30	0.02	mg/L	10.010	ND	101	90-110			
Sulfate	10.3	1.0	0.05	mg/L	10.010	0.57	97	90-110			
Matrix Spike Dup (6060644-MSD1)						Source: AZF0829-03 Prepared: 06/24/16 Analyzed: 06/25/16					
Chloride	14.5	0.25	0.01	mg/L	10.010	4.40	101	90-110	3	15	
Fluoride	10.8	0.30	0.02	mg/L	10.010	0.14	106	90-110	2	15	
Sulfate	14.0	1.0	0.05	mg/L	10.010	4.01	100	90-110	0.04	15	



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Report No.: AZF0829

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6060586 - EPA 7470A											
Blank (6060586-BLK1)						Prepared: 06/23/16 Analyzed: 06/24/16					
Mercury	ND	0.00050	0.00013	mg/L							
LCS (6060586-BS1)						Prepared: 06/23/16 Analyzed: 06/24/16					
Mercury	0.00234	0.00050	0.00013	mg/L	2.5000E-3		94	80-120			
Matrix Spike (6060586-MS1)						Source: AZF0829-02 Prepared: 06/23/16 Analyzed: 06/24/16					
Mercury	0.00221	0.00050	0.00013	mg/L	2.5000E-3	ND	88	75-125			
Matrix Spike Dup (6060586-MSD1)						Source: AZF0829-02 Prepared: 06/23/16 Analyzed: 06/24/16					
Mercury	0.00223	0.00050	0.00013	mg/L	2.5000E-3	ND	89	75-125	0.9	20	
Post Spike (6060586-PS1)						Source: AZF0829-02 Prepared: 06/23/16 Analyzed: 06/24/16					
Mercury	1.55			ug/L	1.6667	-0.00288	93	80-120			
Batch 6060619 - EPA 3005A											
Blank (6060619-BLK1)						Prepared & Analyzed: 06/24/16					
Antimony	0.0008	0.0030	0.0002	mg/L							J
Arsenic	ND	0.0050	0.0007	mg/L							
Barium	ND	0.0100	0.0003	mg/L							
Beryllium	ND	0.0030	0.00009	mg/L							
Boron	ND	0.100	0.0044	mg/L							
Cadmium	ND	0.0010	0.0001	mg/L							
Calcium	ND	0.500	0.0126	mg/L							
Chromium	ND	0.0100	0.0004	mg/L							
Cobalt	ND	0.0100	0.0003	mg/L							
Copper	ND	0.0050	0.0004	mg/L							
Lead	ND	0.0050	0.00008	mg/L							
Molybdenum	ND	0.0100	0.0005	mg/L							
Nickel	ND	0.0050	0.0005	mg/L							
Selenium	ND	0.0100	0.0009	mg/L							
Silver	ND	0.0050	0.0002	mg/L							
Thallium	ND	0.0010	0.00006	mg/L							
Vanadium	ND	0.0100	0.0016	mg/L							
Zinc	ND	0.0100	0.0013	mg/L							
Lithium	ND	0.0500	0.0012	mg/L							



PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
 110 Technology Parkway, Peachtree Corners, GA 30092
 (770) 734-4200 FAX (770) 734-4201

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 29, 2016

Report No.: AZF0829

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6060619 - EPA 3005A											
LCS (6060619-BS1)						Prepared & Analyzed: 06/24/16					
Antimony	0.107	0.0030	0.0002	mg/L	0.10000		107	80-120			
Arsenic	0.103	0.0050	0.0007	mg/L	0.10000		103	80-120			
Barium	0.105	0.0100	0.0003	mg/L	0.10000		105	80-120			
Beryllium	0.104	0.0030	0.00009	mg/L	0.10000		104	80-120			
Boron	1.03	0.100	0.0044	mg/L	1.0000		103	80-120			
Cadmium	0.103	0.0010	0.0001	mg/L	0.10000		103	80-120			
Calcium	1.06	0.500	0.0126	mg/L	1.0000		106	80-120			
Chromium	0.106	0.0100	0.0004	mg/L	0.10000		106	80-120			
Cobalt	0.103	0.0100	0.0003	mg/L	0.10000		103	80-120			
Copper	0.101	0.0050	0.0004	mg/L	0.10000		101	80-120			
Lead	0.102	0.0050	0.00008	mg/L	0.10000		102	80-120			
Molybdenum	0.106	0.0100	0.0005	mg/L	0.10000		106	80-120			
Nickel	0.101	0.0050	0.0005	mg/L	0.10000		101	80-120			
Selenium	0.0985	0.0100	0.0009	mg/L	0.10000		98	80-120			
Silver	0.102	0.0050	0.0002	mg/L	0.10000		102	80-120			
Thallium	0.103	0.0010	0.00006	mg/L	0.10000		103	80-120			
Vanadium	0.105	0.0100	0.0016	mg/L	0.10000		105	80-120			
Zinc	0.105	0.0100	0.0013	mg/L	0.10000		105	80-120			
Lithium	0.110	0.0500	0.0012	mg/L	0.10000		110	80-120			
Matrix Spike (6060619-MS1)											
				Source: AZF0829-01		Prepared & Analyzed: 06/24/16					
Antimony	0.104	0.0030	0.0002	mg/L	0.10000	0.0017	103	75-125			
Arsenic	0.141	0.0050	0.0007	mg/L	0.10000	0.0352	106	75-125			
Barium	0.170	0.0100	0.0003	mg/L	0.10000	0.0539	116	75-125			
Beryllium	0.0931	0.0030	0.00009	mg/L	0.10000	ND	93	75-125			
Boron	1.02	0.100	0.0044	mg/L	1.0000	0.124	90	75-125			
Cadmium	0.105	0.0010	0.0001	mg/L	0.10000	ND	105	75-125			
Calcium	93.1	25.0	0.628	mg/L	1.0000	91.2	186	75-125			QM-02
Chromium	0.103	0.0100	0.0004	mg/L	0.10000	ND	103	75-125			
Cobalt	0.102	0.0100	0.0003	mg/L	0.10000	0.0003	102	75-125			
Copper	0.0994	0.0050	0.0004	mg/L	0.10000	ND	99	75-125			
Lead	0.0994	0.0050	0.00008	mg/L	0.10000	ND	99	75-125			
Molybdenum	0.106	0.0100	0.0005	mg/L	0.10000	ND	106	75-125			
Nickel	0.101	0.0050	0.0005	mg/L	0.10000	0.0006	100	75-125			
Selenium	0.102	0.0100	0.0009	mg/L	0.10000	ND	102	75-125			
Silver	0.0988	0.0050	0.0002	mg/L	0.10000	ND	99	75-125			
Thallium	0.101	0.0010	0.00006	mg/L	0.10000	0.0001	101	75-125			
Vanadium	0.105	0.0100	0.0016	mg/L	0.10000	ND	105	75-125			
Zinc	0.103	0.0100	0.0013	mg/L	0.10000	0.0020	101	75-125			
Lithium	0.0976	0.0500	0.0012	mg/L	0.10000	ND	98	75-125			



PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
 110 Technology Parkway, Peachtree Corners, GA 30092
 (770) 734-4200 FAX (770) 734-4201

Georgia Power
 2480 Maner Road
 Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 29, 2016

Report No.: AZF0829

Metals, Total - Quality Control

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6060619 - EPA 3005A											
Matrix Spike Dup (6060619-MSD1)		Source: AZF0829-01				Prepared & Analyzed: 06/24/16					
Antimony	0.101	0.0030	0.0002	mg/L	0.10000	0.0017	100	75-125	3	20	
Arsenic	0.138	0.0050	0.0007	mg/L	0.10000	0.0352	103	75-125	2	20	
Barium	0.165	0.0100	0.0003	mg/L	0.10000	0.0539	111	75-125	3	20	
Beryllium	0.0903	0.0030	0.00009	mg/L	0.10000	ND	90	75-125	3	20	
Boron	1.01	0.100	0.0044	mg/L	1.0000	0.124	89	75-125	0.6	20	
Cadmium	0.101	0.0010	0.0001	mg/L	0.10000	ND	101	75-125	4	20	
Calcium	87.9	25.0	0.628	mg/L	1.0000	91.2	NR	75-125	6	20	QM-02
Chromium	0.102	0.0100	0.0004	mg/L	0.10000	ND	102	75-125	0.4	20	
Cobalt	0.100	0.0100	0.0003	mg/L	0.10000	0.0003	100	75-125	2	20	
Copper	0.0953	0.0050	0.0004	mg/L	0.10000	ND	95	75-125	4	20	
Lead	0.0968	0.0050	0.00008	mg/L	0.10000	ND	97	75-125	3	20	
Molybdenum	0.103	0.0100	0.0005	mg/L	0.10000	ND	103	75-125	3	20	
Nickel	0.0994	0.0050	0.0005	mg/L	0.10000	0.0006	99	75-125	2	20	
Selenium	0.100	0.0100	0.0009	mg/L	0.10000	ND	100	75-125	2	20	
Silver	0.0971	0.0050	0.0002	mg/L	0.10000	ND	97	75-125	2	20	
Thallium	0.0985	0.0010	0.00006	mg/L	0.10000	0.0001	98	75-125	2	20	
Vanadium	0.102	0.0100	0.0016	mg/L	0.10000	ND	102	75-125	3	20	
Zinc	0.101	0.0100	0.0013	mg/L	0.10000	0.0020	99	75-125	3	20	
Lithium	0.0963	0.0500	0.0012	mg/L	0.10000	ND	96	75-125	1	20	
Post Spike (6060619-PS1)		Source: AZF0829-01				Prepared & Analyzed: 06/24/16					
Antimony	94.9			ug/L	100.00	1.68	93	80-120			
Arsenic	139			ug/L	100.00	35.2	104	80-120			
Barium	168			ug/L	100.00	53.9	114	80-120			
Beryllium	90.9			ug/L	100.00	0.0379	91	80-120			
Boron	1020			ug/L	1000.0	124	89	80-120			
Cadmium	104			ug/L	100.00	0.0228	104	80-120			
Calcium	90800			ug/L	1000.0	91200	NR	80-120			QM-02
Chromium	102			ug/L	100.00	-0.135	102	80-120			
Cobalt	101			ug/L	100.00	0.343	100	80-120			
Copper	97.2			ug/L	100.00	-0.140	97	80-120			
Lead	97.3			ug/L	100.00	0.0771	97	80-120			
Molybdenum	106			ug/L	100.00	0.427	106	80-120			
Nickel	99.9			ug/L	100.00	0.641	99	80-120			
Selenium	104			ug/L	100.00	0.0736	104	80-120			
Silver	96.8			ug/L	100.00	0.0390	97	80-120			
Thallium	98.7			ug/L	100.00	0.139	99	80-120			
Vanadium	102			ug/L	100.00	-0.655	103	80-120			
Zinc	103			ug/L	100.00	2.05	101	80-120			
Lithium	96.4			ug/L	100.00	0.254	96	80-120			



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Georgia Power
2480 Maner Road
Atlanta GA, 30339

Attention: Mr. Joju Abraham

June 29, 2016

Legend

Definition of Laboratory Terms

- ND** - Not Detected at levels equal to or greater than the MDL
BRL - Not Detected at levels equal to or greater than the RL
RL - Reporting Limit **MDL** - Method Detection Limit
SOP - Method run per Pace Standard Operating Procedure
CFU - Colony Forming Units
DF - Dilution Factor **TIC** - Tentatively Identified Compound

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrosodiphenylamine. Pace is not NELAC certified for N-Nitrosodiphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Definition of Qualifiers

- QM-02** The spike recovery is outside acceptance limits due to insignificant spike amount as compared to sample concentration.
- J** Estimated value less than Reporting Limit (RL) but greater than Method Detection Limit(MDL) (CLP J-Flag).
- B-01** Analyte was detected in the associated method blank at an estimated level equal to or greater than the MDL. Sample values reported as greater than the MDL and less than 10x the method blank value are reported as estimated values.

Note: Unless otherwise noted, all results are reported on an as received basis.

Georgia Power Environmental Laboratory
 NELAP Certification #E57554
 2480 Maner Road, BIN 39110
 Atlanta, Georgia 30339
 Phone: (404) 790-2100
 Company: 8-530-2100

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

LAB USE ONLY

Work Order No. AZF0829
 Reviewed By: _____
 Page 1 of 1

Custody seal IDs 20160621-01
2016 0621-02

Sample Shipment Date:⁸ 6/21/16
 Sample Received Date:⁹ _____

¹² Standard Turnaround Time

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

Sampled By:¹⁰ Amanda Storrer (AS)
Myles Rogers (MR)
Will Virgo (WV)
Stephanie Huss

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

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

LAB USE ONLY LAB ID	Sample Number ¹⁴	Collection ¹⁵		Sample Description ¹⁶	Sample Type	Matrix	No. of Containers	ANALYSIS REQUESTED ²¹		PRESERVATIVE ²⁰		Sample Type Key: ²² G-Gel O-Other C-Corrosive
		Date	Time					HNO3 N	Ice I	HNO3 -N	HNO3 -N	
	MGWA-6	6/21/16	0848		G	GW	3	✓	✓	✓	✓	
	DUP-1	6/21/16	—		G	GW	3	✓	✓	✓	✓	
	MGWC-12	6/21/16	1250		G	GW	3	✓	✓	✓	✓	
	MGWC-3	6/21/16	1100		G	GW	3	✓	✓	✓	✓	
	FB-1	6/21/16	1545		G	DI	3	✓	✓	✓	✓	
	FERB-1	6/21/16	1650		G	DI	3	✓	✓	✓	✓	
	MGWC-7	6/21/16	0920		G	GW	3	✓	✓	✓	✓	
	MGWC-2	6/21/16	1125		G	GW	3	✓	✓	✓	✓	
	MGWC-1	6/21/16	1230		G	GW	3	✓	✓	✓	✓	
	MGWC-8	6/21/16	8:55		G	GW	3	✓	✓	✓	✓	

LAB USE ONLY: Sample Receipt Information ²⁸	
Relinquished by: ²⁵ <u>Amanda Storrer</u>	Date/Time: <u>6/21/16 17:45</u>
Received by: ²⁷ <u>[Signature]</u>	Date/Time: <u>6-22-16 1030</u>
Relinquished by:	Date/Time:
Received by:	Date/Time:

Handwritten notes:
 Ra-SM-846-081-192
 of Tech
 Radon-226 & 228
 TDS SM2540C
 EPA 6020 & EPA 7470
 Metals app. III & IV
 Cl, F, SO4 EPA 300
 Ra-226 & 228
 Ra-226 & 228



PACE ANALYTICAL SERVICES, INC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

LOG-IN CHECKLIST

Printed: 6/29/2016 4:46:33PM

Attn: Mr. Joju Abraham

Client: Georgia Power

Project: CCR Event

Date Received: 06/22/16 15:15

Work Order: AZF0829

Logged In By: Mohammad M. Rahman

OBSERVATIONS

#Samples: 10

#Containers: 30

Minimum Temp(C): 2.0

Maximum Temp(C): 2.0

Custody Seal(s) Used: Yes

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	YES
Custody seal Intact	YES
Temperature in Compliance	YES
Sufficient Sample Volume for Analysis	YES
Zero Headspace Maintained for VOA Analyses	YES
Samples labeled preserved (If Applicable)	YES
Samples received within Allowable Hold Times	YES
Samples Received on Ice	YES
Preservation Confirmed	YES

Comments:

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: 400-123939-1

Client Project/Site: CCR Plant McIntosh

For:

Georgia Power - Environmental Lab

Bin 39110

2480 Maner Road

Smyrna, Georgia 30080

Attn: Jolynn Locke



Authorized for release by:

8/9/2016 6:12:00 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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results through

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www.testamericainc.com

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

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

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

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Case Narrative

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

TestAmerica Job ID: 400-123939-1

Job ID: 400-123939-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-123939-1

RAD

Method(s) PrecSep_0: Insufficient sample volume was available to perform a sample duplicate (DUP) associated with Ra 228 analytical batch 160-262763. A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

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Method Summary

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

TestAmerica Job ID: 400-123939-1

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 McIntosh

TestAmerica Job ID: 400-123939-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-123939-1	FB-01	Water	05/05/16 19:00	07/05/16 10:01
400-123939-2	EB-01	Water	05/05/16 19:30	07/05/16 10:01
400-123939-3	MGWC-03	Water	05/06/16 09:30	07/05/16 10:01
400-123939-4	MGWC-01	Water	05/06/16 09:56	07/05/16 10:01
400-123939-5	MGWC-07	Water	05/05/16 18:52	07/05/16 10:01
400-123939-6	MGWC-02	Water	05/06/16 09:25	07/05/16 10:01
400-123939-7	MGWA-09	Water	05/05/16 12:44	07/05/16 10:01
400-123939-8	MGWA-05	Water	05/05/16 15:50	07/05/16 10:01
400-123939-9	MWGC-08	Water	05/05/16 17:22	07/05/16 10:01
400-123939-10	MGWA-10	Water	05/05/16 13:30	07/05/16 10:01
400-123939-11	MGWA-06	Water	05/05/16 17:30	07/05/16 10:01
400-123939-12	DUP-01	Water	05/05/16 13:30	07/05/16 10:01

Client Sample Results

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

TestAmerica Job ID: 400-123939-1

Client Sample ID: FB-01
Date Collected: 05/05/16 19:00
Date Received: 07/05/16 10:01

Lab Sample ID: 400-123939-1
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	-0.0644	U	0.0712	0.0714	1.00	0.173	pCi/L	07/07/16 11:25	07/29/16 07:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.3		40 - 110					07/07/16 11:25	07/29/16 07:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0883	U	0.210	0.210	1.00	0.364	pCi/L	07/07/16 11:25	07/28/16 13:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.3		40 - 110					07/07/16 11:25	07/28/16 13:04	1
Y Carrier	84.1		40 - 110					07/07/16 11:25	07/28/16 13:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0239	U	0.222	0.222	5.00	0.364	pCi/L		07/30/16 00:26	1

Client Sample ID: EB-01
Date Collected: 05/05/16 19:30
Date Received: 07/05/16 10:01

Lab Sample ID: 400-123939-2
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	-0.0177	U	0.0816	0.0816	1.00	0.171	pCi/L	07/07/16 11:25	07/29/16 07:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.9		40 - 110					07/07/16 11:25	07/29/16 07:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.144	U	0.230	0.231	1.00	0.388	pCi/L	07/07/16 11:25	07/28/16 13:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.9		40 - 110					07/07/16 11:25	07/28/16 13:05	1
Y Carrier	84.9		40 - 110					07/07/16 11:25	07/28/16 13:05	1

Client Sample Results

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

TestAmerica Job ID: 400-123939-1

Client Sample ID: EB-01
Date Collected: 05/05/16 19:30
Date Received: 07/05/16 10:01

Lab Sample ID: 400-123939-2
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.126	U	0.244	0.245	5.00	0.388	pCi/L		07/30/16 00:26	1

Client Sample ID: MGWC-03
Date Collected: 05/06/16 09:30
Date Received: 07/05/16 10:01

Lab Sample ID: 400-123939-3
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	1.18		0.235	0.258	1.00	0.179	pCi/L	07/07/16 11:25	07/29/16 10:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					07/07/16 11:25	07/29/16 10:26	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.232	U	0.256	0.257	1.00	0.420	pCi/L	07/07/16 11:25	07/28/16 13:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					07/07/16 11:25	07/28/16 13:05	1
Y Carrier	85.2		40 - 110					07/07/16 11:25	07/28/16 13:05	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.41		0.348	0.364	5.00	0.420	pCi/L		07/30/16 00:26	1

Client Sample ID: MGWC-01
Date Collected: 05/06/16 09:56
Date Received: 07/05/16 10:01

Lab Sample ID: 400-123939-4
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	0.667		0.197	0.206	1.00	0.194	pCi/L	07/07/16 11:25	07/29/16 10:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.1		40 - 110					07/07/16 11:25	07/29/16 10:27	1

Client Sample Results

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

TestAmerica Job ID: 400-123939-1

Client Sample ID: MGWC-01

Date Collected: 05/06/16 09:56

Date Received: 07/05/16 10:01

Lab Sample ID: 400-123939-4

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	0.400	U	0.291	0.293	1.00	0.455	pCi/L	07/07/16 11:25	07/28/16 13:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.1		40 - 110					07/07/16 11:25	07/28/16 13:05	1
Y Carrier	88.2		40 - 110					07/07/16 11:25	07/28/16 13:05	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.07		0.351	0.358	5.00	0.455	pCi/L		07/30/16 00:26	1

Client Sample ID: MGWC-07

Date Collected: 05/05/16 18:52

Date Received: 07/05/16 10:01

Lab Sample ID: 400-123939-5

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	0.349		0.177	0.179	1.00	0.235	pCi/L	07/07/16 11:25	07/29/16 10:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.4		40 - 110					07/07/16 11:25	07/29/16 10:27	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.401	U	0.297	0.299	1.00	0.463	pCi/L	07/07/16 11:25	07/28/16 13:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.4		40 - 110					07/07/16 11:25	07/28/16 13:05	1
Y Carrier	84.9		40 - 110					07/07/16 11:25	07/28/16 13:05	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.750		0.345	0.349	5.00	0.463	pCi/L		07/30/16 00:26	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-123939-1

Client Sample ID: MGWC-02

Lab Sample ID: 400-123939-6

Date Collected: 05/06/16 09:25

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	0.323		0.141	0.144	1.00	0.162	pCi/L	07/07/16 11:25	07/29/16 10:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.2		40 - 110					07/07/16 11:25	07/29/16 10:27	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.310	U	0.258	0.260	1.00	0.411	pCi/L	07/07/16 11:25	07/28/16 13:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.2		40 - 110					07/07/16 11:25	07/28/16 13:05	1
Y Carrier	87.1		40 - 110					07/07/16 11:25	07/28/16 13:05	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.633		0.295	0.297	5.00	0.411	pCi/L		07/30/16 00:26	1

Client Sample ID: MGWA-09

Lab Sample ID: 400-123939-7

Date Collected: 05/05/16 12:44

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	0.209		0.120	0.122	1.00	0.156	pCi/L	07/07/16 11:25	07/29/16 10:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					07/07/16 11:25	07/29/16 10:27	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.291	U	0.249	0.251	1.00	0.398	pCi/L	07/07/16 11:25	07/28/16 13:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		40 - 110					07/07/16 11:25	07/28/16 13:05	1
Y Carrier	88.6		40 - 110					07/07/16 11:25	07/28/16 13:05	1

Client Sample Results

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

TestAmerica Job ID: 400-123939-1

Client Sample ID: MGWA-09

Date Collected: 05/05/16 12:44

Date Received: 07/05/16 10:01

Lab Sample ID: 400-123939-7

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	0.500		0.277	0.279	5.00	0.398	pCi/L		07/30/16 00:26	1

Client Sample ID: MGWA-05

Date Collected: 05/05/16 15:50

Date Received: 07/05/16 10:01

Lab Sample ID: 400-123939-8

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	0.165	U	0.144	0.144	1.00	0.224	pCi/L	07/07/16 11:25	07/29/16 10:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					07/07/16 11:25	07/29/16 10:27	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.315	U	0.259	0.261	1.00	0.412	pCi/L	07/07/16 11:25	07/28/16 13:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					07/07/16 11:25	07/28/16 13:05	1
Y Carrier	84.5		40 - 110					07/07/16 11:25	07/28/16 13:05	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.480		0.296	0.298	5.00	0.412	pCi/L		07/30/16 00:26	1

Client Sample ID: MWGC-08

Date Collected: 05/05/16 17:22

Date Received: 07/05/16 10:01

Lab Sample ID: 400-123939-9

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	0.945		0.238	0.253	1.00	0.245	pCi/L	07/07/16 11:25	07/29/16 10:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					07/07/16 11:25	07/29/16 10:27	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-123939-1

Client Sample ID: MWGC-08

Date Collected: 05/05/16 17:22

Date Received: 07/05/16 10:01

Lab Sample ID: 400-123939-9

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	0.262	U	0.261	0.262	1.00	0.424	pCi/L	07/07/16 11:25	07/28/16 13:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					07/07/16 11:25	07/28/16 13:05	1
Y Carrier	87.5		40 - 110					07/07/16 11:25	07/28/16 13:05	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.21		0.353	0.364	5.00	0.424	pCi/L		07/30/16 00:26	1

Client Sample ID: MGWA-10

Date Collected: 05/05/16 13:30

Date Received: 07/05/16 10:01

Lab Sample ID: 400-123939-10

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	0.592		0.174	0.182	1.00	0.162	pCi/L	07/07/16 11:25	07/29/16 10:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.6		40 - 110					07/07/16 11:25	07/29/16 10:27	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.287	U	0.214	0.216	1.00	0.334	pCi/L	07/29/16 20:37	08/04/16 12:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.6		40 - 110					07/29/16 20:37	08/04/16 12:11	1
Y Carrier	81.5		40 - 110					07/29/16 20:37	08/04/16 12:11	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	0.879		0.276	0.282	5.00	0.334	pCi/L		08/05/16 16:07	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-123939-1

Client Sample ID: MGWA-06

Lab Sample ID: 400-123939-11

Date Collected: 05/05/16 17:30

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	0.431		0.182	0.187	1.00	0.237	pCi/L	07/07/16 11:25	07/29/16 10:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					07/07/16 11:25	07/29/16 10:27	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.263	U	0.279	0.280	1.00	0.456	pCi/L	07/29/16 20:37	08/04/16 12:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					07/29/16 20:37	08/04/16 12:12	1
Y Carrier	83.0		40 - 110					07/29/16 20:37	08/04/16 12:12	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	0.694		0.333	0.337	5.00	0.456	pCi/L		08/05/16 16:07	1

Client Sample ID: DUP-01

Lab Sample ID: 400-123939-12

Date Collected: 05/05/16 13:30

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	0.419		0.181	0.185	1.00	0.237	pCi/L	07/07/16 11:25	07/29/16 10:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					07/07/16 11:25	07/29/16 10:27	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0178	U	0.200	0.200	1.00	0.366	pCi/L	07/07/16 11:25	07/28/16 13:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					07/07/16 11:25	07/28/16 13:05	1
Y Carrier	86.7		40 - 110					07/07/16 11:25	07/28/16 13:05	1

TestAmerica Pensacola

Client Sample Results

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

TestAmerica Job ID: 400-123939-1

Client Sample ID: DUP-01
Date Collected: 05/05/16 13:30
Date Received: 07/05/16 10:01

Lab Sample ID: 400-123939-12
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	0.401		0.270	0.272	5.00	0.366	pCi/L		07/30/16 00:26	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Definitions/Glossary

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

TestAmerica Job ID: 400-123939-1

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: Georgia Power - Environmental Lab
 Project/Site: CCR Plant McIntosh

TestAmerica Job ID: 400-123939-1

Client Sample ID: FB-01

Date Collected: 05/05/16 19:00

Date Received: 07/05/16 10:01

Lab Sample ID: 400-123939-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259558	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9315		1	262648	07/29/16 07:15	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259562	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9320		1	262450	07/28/16 13:04	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:26	RTM	TAL SL

Client Sample ID: EB-01

Date Collected: 05/05/16 19:30

Date Received: 07/05/16 10:01

Lab Sample ID: 400-123939-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259558	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9315		1	262648	07/29/16 07:15	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259562	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9320		1	262450	07/28/16 13:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:26	RTM	TAL SL

Client Sample ID: MGWC-03

Date Collected: 05/06/16 09:30

Date Received: 07/05/16 10:01

Lab Sample ID: 400-123939-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259558	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9315		1	262632	07/29/16 10:26	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259562	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9320		1	262450	07/28/16 13:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:26	RTM	TAL SL

Client Sample ID: MGWC-01

Date Collected: 05/06/16 09:56

Date Received: 07/05/16 10:01

Lab Sample ID: 400-123939-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			259558	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9315		1	262632	07/29/16 10:27	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259562	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9320		1	262450	07/28/16 13:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:26	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-123939-1

Client Sample ID: MGWC-07

Lab Sample ID: 400-123939-5

Date Collected: 05/05/16 18:52

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			259558	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9315		1	262632	07/29/16 10:27	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259562	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9320		1	262450	07/28/16 13:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:26	RTM	TAL SL

Client Sample ID: MGWC-02

Lab Sample ID: 400-123939-6

Date Collected: 05/06/16 09:25

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			259558	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9315		1	262632	07/29/16 10:27	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259562	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9320		1	262450	07/28/16 13:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:26	RTM	TAL SL

Client Sample ID: MGWA-09

Lab Sample ID: 400-123939-7

Date Collected: 05/05/16 12:44

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			259558	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9315		1	262632	07/29/16 10:27	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259562	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9320		1	262450	07/28/16 13:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:26	RTM	TAL SL

Client Sample ID: MGWA-05

Lab Sample ID: 400-123939-8

Date Collected: 05/05/16 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			259558	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9315		1	262632	07/29/16 10:27	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259562	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9320		1	262450	07/28/16 13:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:26	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-123939-1

Client Sample ID: MWGC-08

Lab Sample ID: 400-123939-9

Date Collected: 05/05/16 17:22

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			259558	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9315		1	262632	07/29/16 10:27	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259562	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9320		1	262450	07/28/16 13:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:26	RTM	TAL SL

Client Sample ID: MGWA-10

Lab Sample ID: 400-123939-10

Date Collected: 05/05/16 13:30

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			259558	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9315		1	262632	07/29/16 10:27	RTM	TAL SL
Total/NA	Prep	PrecSep_0			262763	07/29/16 20:37	MCJ	TAL SL
Total/NA	Analysis	9320		1	263544	08/04/16 12:11	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263672	08/05/16 16:07	RTM	TAL SL

Client Sample ID: MGWA-06

Lab Sample ID: 400-123939-11

Date Collected: 05/05/16 17:30

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			259558	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9315		1	262632	07/29/16 10:27	RTM	TAL SL
Total/NA	Prep	PrecSep_0			262763	07/29/16 20:37	MCJ	TAL SL
Total/NA	Analysis	9320		1	263544	08/04/16 12:12	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	263672	08/05/16 16:07	RTM	TAL SL

Client Sample ID: DUP-01

Lab Sample ID: 400-123939-12

Date Collected: 05/05/16 13:30

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			259558	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9315		1	262632	07/29/16 10:27	RTM	TAL SL
Total/NA	Prep	PrecSep_0			259562	07/07/16 11:25	SCB	TAL SL
Total/NA	Analysis	9320		1	262450	07/28/16 13:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	262766	07/30/16 00:26	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: Georgia Power - Environmental Lab
 Project/Site: CCR Plant McIntosh

TestAmerica Job ID: 400-123939-1

Rad

Prep Batch: 259558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123939-1	FB-01	Total/NA	Water	PrecSep-21	
400-123939-2	EB-01	Total/NA	Water	PrecSep-21	
400-123939-3	MGWC-03	Total/NA	Water	PrecSep-21	
400-123939-4	MGWC-01	Total/NA	Water	PrecSep-21	
400-123939-5	MGWC-07	Total/NA	Water	PrecSep-21	
400-123939-6	MGWC-02	Total/NA	Water	PrecSep-21	
400-123939-7	MGWA-09	Total/NA	Water	PrecSep-21	
400-123939-8	MGWA-05	Total/NA	Water	PrecSep-21	
400-123939-9	MWGC-08	Total/NA	Water	PrecSep-21	
400-123939-10	MGWA-10	Total/NA	Water	PrecSep-21	
400-123939-11	MGWA-06	Total/NA	Water	PrecSep-21	
400-123939-12	DUP-01	Total/NA	Water	PrecSep-21	
MB 160-259558/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-259558/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-123939-1 DU	FB-01	Total/NA	Water	PrecSep-21	

Prep Batch: 259562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123939-1	FB-01	Total/NA	Water	PrecSep_0	
400-123939-2	EB-01	Total/NA	Water	PrecSep_0	
400-123939-3	MGWC-03	Total/NA	Water	PrecSep_0	
400-123939-4	MGWC-01	Total/NA	Water	PrecSep_0	
400-123939-5	MGWC-07	Total/NA	Water	PrecSep_0	
400-123939-6	MGWC-02	Total/NA	Water	PrecSep_0	
400-123939-7	MGWA-09	Total/NA	Water	PrecSep_0	
400-123939-8	MGWA-05	Total/NA	Water	PrecSep_0	
400-123939-9	MWGC-08	Total/NA	Water	PrecSep_0	
400-123939-12	DUP-01	Total/NA	Water	PrecSep_0	
MB 160-259562/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-259562/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-123939-1 DU	FB-01	Total/NA	Water	PrecSep_0	

Prep Batch: 262763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-123939-10	MGWA-10	Total/NA	Water	PrecSep_0	
400-123939-11	MGWA-06	Total/NA	Water	PrecSep_0	
MB 160-262763/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-262763/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-262763/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-123939-1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-259558/1-A
Matrix: Water
Analysis Batch: 262648

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 259558

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.09751	U	0.0993	0.0997	1.00	0.156	pCi/L	07/07/16 11:25	07/29/16 07:14	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	82.3		40 - 110		07/07/16 11:25	07/29/16 07:14	1			

Lab Sample ID: LCS 160-259558/2-A
Matrix: Water
Analysis Batch: 262648

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 259558

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.2	13.90		1.52	1.00	0.316	pCi/L	125	68 - 137
Carrier	LCS LCS		Limits		Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier	Limits						
Ba Carrier	65.8		40 - 110						

Lab Sample ID: 400-123939-1 DU
Matrix: Water
Analysis Batch: 262648

Client Sample ID: FB-01
Prep Type: Total/NA
Prep Batch: 259558

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-226	-0.0644	U	0.02800	U	0.0943	1.00	0.175	pCi/L	0.56	1
Carrier	DU DU		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	92.9		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-259562/1-A
Matrix: Water
Analysis Batch: 262450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 259562

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.2753	U	0.258	0.259	1.00	0.415	pCi/L	07/07/16 11:25	07/28/16 13:03	1
Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier	Limits							
Ba Carrier	82.3		40 - 110		07/07/16 11:25	07/28/16 13:03	1			
Y Carrier	MB MB		Limits		Prepared	Analyzed	Dil Fac			
Y Carrier	%Yield	Qualifier	Limits							
Y Carrier	84.5		40 - 110		07/07/16 11:25	07/28/16 13:03	1			

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-123939-1

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

Lab Sample ID: LCS 160-259562/2-A
Matrix: Water
Analysis Batch: 262450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 259562

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.8	15.67		1.79	1.00	0.524	pCi/L	106	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	65.8		40 - 110
Y Carrier	81.5		40 - 110

Lab Sample ID: 400-123939-1 DU
Matrix: Water
Analysis Batch: 262450

Client Sample ID: FB-01
Prep Type: Total/NA
Prep Batch: 259562

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.0883	U	-0.07249	U	0.231	1.00	0.424	pCi/L	0.36	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	92.9		40 - 110
Y Carrier	87.5		40 - 110

Lab Sample ID: MB 160-262763/1-A
Matrix: Water
Analysis Batch: 263544

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 262763

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.07102	U	0.197	0.197	1.00	0.366	pCi/L	07/29/16 20:37	08/04/16 12:11	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	97.4		40 - 110	07/29/16 20:37	08/04/16 12:11	1
Y Carrier	85.2		40 - 110	07/29/16 20:37	08/04/16 12:11	1

Lab Sample ID: LCS 160-262763/2-A
Matrix: Water
Analysis Batch: 263544

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 262763

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.8	14.67		1.56	1.00	0.360	pCi/L	99	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	95.7		40 - 110
Y Carrier	89.0		40 - 110

QC Sample Results

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

TestAmerica Job ID: 400-123939-1

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

Lab Sample ID: LCSD 160-262763/3-A
Matrix: Water
Analysis Batch: 263544

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 262763

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	14.8	13.83		1.49	1.00	0.351	pCi/L	94	56 - 140	0.27	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	94.0		40 - 110
Y Carrier	88.6		40 - 110

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400-123939 COC



TRANSFER OF SAMPLES

Environmental Laboratory

2480 Maner Road, Bin 391.10
Atlanta, Georgia 30339

Phone: (404) 799-2100

Fax: (404) 799-2141

Sample Delivery Group No. 103229

Lab Contact: Jolynn Locke	Project Name: McIntosh CCR	Vendor Laboratory Name and Address Test America 3355 McLeMores Drive Pensacola, FL 32514 850-474-1001
Email Results To: jklocke@southernco.com		Date of Sample Transfer 6-30-16
Turnaround Time: (or expected date of results) 21 days		
Rush Charges Authorized: Yes No x Signature:		

Sample Date	Sample Time	No. of Containers	Project ID#	Laboratory ID#	Analysis Requested	Remarks
5/5/2016	19:00	1	FB-01	103229001	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/5/2016	19:30	1	EB-01	103229002	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/6/2016	9:30	1	MGWC-03	103229003	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/6/2016	9:56	1	MGWC-01	103229004	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/5/2016	18:52	1	MGWC-07	103229005	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/6/2016	9:25	1	MGWC-02	103229006	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	

Transfer By (Signature): 	Received By:
Comments: Samples preserved with HNO3 to <2 pH	
Date / Time: 7/5/16 1001	



α

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. 103223

Lab Contact: Jolynn Locke		Project Name: McIntosh CCR		Vendor Laboratory Name and Address Test America		
Email Results To: <u>jlocke@southernco.com</u>				3355 McLeMore Drive		
Turnaround Time: (or expected date of results) 21 days				Pensacola, FL 32514		
Rush Charges Authorized: Yes No x Signature:				850-474-1001		
				Date of Sample Transfer 6-30-16		
Sample Date	Sample Time	No. of Containers	Project ID#	Laboratory ID#	Analysis Requested	Remarks
5/5/2016	12:44	1	MGWA-09	103223001	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/5/2016	15:50	1	MGWA-05	103223002	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/5/2016	17:22	1	MWGC-08	103223003	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/5/2016	13:30	1	MGWA-10	103223004	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/5/2016	17:30	1	MGWA-06	103223005	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
5/5/2016	13:30	1	DUP-01	103223006	Radium 226 SW-864 #9315/Radium 228 SW-846 #9320/Ra Combined	
Transfer By (Signature): <i>Jolynn Locke</i>				Received By: <i>[Signature]</i>		
Comments: Samples preserved with HNO3 to <2 pH				Date / Time: 7/5/16 1001		



Login Sample Receipt Checklist

Client: Georgia Power - Environmental Lab

Job Number: 400-123939-1

Login Number: 123939

List Number: 1

Creator: Perez, Trina M

List Source: TestAmerica Pensacola

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

Certification Summary

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

TestAmerica Job ID: 400-123939-1

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 McIntosh

TestAmerica Job ID: 400-123939-1

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: 400-125883-1

TestAmerica Sample Delivery Group: AP

Client Project/Site: CCR - Plant McIntosh

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

8/29/2016 1:32:22 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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

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

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

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Case Narrative

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Job ID: 400-125883-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-125883-1

HPLC/IC

Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: MGWC-2 (400-125883-10). 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: MGWC-2 (400-125883-10). Elevated reporting limits (RLs) are provided.

Method(s) 7470A: The method blank for prep batch 319015 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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- 12
- 13
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Detection Summary

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Client Sample ID: MGWA-10

Lab Sample ID: 400-125883-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.5		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
Arsenic	0.00096	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.029		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.022	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	6.1		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0029		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0065		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.00062	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	58		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWA-5

Lab Sample ID: 400-125883-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.4		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	7.5		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	0.023	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	26		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0059		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0013	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	160		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWA-11

Lab Sample ID: 400-125883-3

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	0.10	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	0.73	J	1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0033		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.11		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	34		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.020		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0022	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Mercury	0.000080	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Client Sample ID: MGWA-11 (Continued)

Lab Sample ID: 400-125883-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	180		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWA-6

Lab Sample ID: 400-125883-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10		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	0.035		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.053		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.18		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	94		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	310		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-7

Lab Sample ID: 400-125883-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14		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	170		5.0	3.5	mg/L	5		300.0	Total/NA
Arsenic	0.0012	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.015		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.3		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	50		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0098		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.12		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	330		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-8

Lab Sample ID: 400-125883-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.5		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	120		5.0	3.5	mg/L	5		300.0	Total/NA
Barium	0.030		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00053	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Boron	0.80		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	27		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 McIntosh

TestAmerica Job ID: 400-125883-1
SDG: AP

Client Sample ID: MGWC-8 (Continued)

Lab Sample ID: 400-125883-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.0038		0.0025	0.00040	mg/L	5		6020	Total
Lithium	0.026		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.00033	J	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00016	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Mercury	0.00015	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	230		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-1

Lab Sample ID: 400-125883-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10		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	0.039		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.055		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.17		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	92		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00044	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	310		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-1

Lab Sample ID: 400-125883-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14		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	120		5.0	3.5	mg/L	5		300.0	Total/NA
Arsenic	0.0030		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.094		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.85		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	84		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00047	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.012		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0019	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	360		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-3

Lab Sample ID: 400-125883-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		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 McIntosh

TestAmerica Job ID: 400-125883-1
SDG: AP

Client Sample ID: MGWC-3 (Continued)

Lab Sample ID: 400-125883-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	88		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	0.13		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.0		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	97		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00064	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.010		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	360		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-2

Lab Sample ID: 400-125883-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	20		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	270		10	7.0	mg/L	10		300.0	Total/NA
Barium	0.052		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.0034		0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cobalt	0.0034		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0043	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Boron - DL	2.8		1.0	0.42	mg/L	100		6020	Total Recoverable
Calcium - DL	120		5.0	2.5	mg/L	100		6020	Total Recoverable
Mercury	0.000078	J	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	650		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-12

Lab Sample ID: 400-125883-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.6		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.29		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
Arsenic	0.00082	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.041		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.055		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	25		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.014		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0012	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	160		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 McIntosh

TestAmerica Job ID: 400-125883-1
SDG: AP

Client Sample ID: FB-1

Lab Sample ID: 400-125883-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.000085	J	0.00020	0.000070	mg/L	1		7470A	Total/NA

Client Sample ID: FERB-1

Lab Sample ID: 400-125883-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0018	J	0.0025	0.00049	mg/L	5		6020	Total Recoverable
Mercury	0.000072	J	0.00020	0.000070	mg/L	1		7470A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

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

TestAmerica Job ID: 400-125883-1
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 McIntosh

TestAmerica Job ID: 400-125883-1
SDG: AP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-125883-1	MGWA-10	Water	08/15/16 13:00	08/17/16 09:17
400-125883-2	MGWA-5	Water	08/15/16 13:18	08/17/16 09:17
400-125883-3	MGWA-11	Water	08/15/16 13:45	08/17/16 09:17
400-125883-4	MGWA-6	Water	08/15/16 15:05	08/17/16 09:17
400-125883-5	MGWC-7	Water	08/15/16 15:05	08/17/16 09:17
400-125883-6	MGWC-8	Water	08/15/16 15:40	08/17/16 09:17
400-125883-7	DUP-1	Water	08/15/16 00:00	08/17/16 09:17
400-125883-8	MGWC-1	Water	08/16/16 10:20	08/18/16 10:07
400-125883-9	MGWC-3	Water	08/16/16 09:55	08/18/16 10:07
400-125883-10	MGWC-2	Water	08/16/16 11:55	08/18/16 10:07
400-125883-11	MGWC-12	Water	08/16/16 12:50	08/18/16 10:07
400-125883-12	FB-1	Water	08/16/16 13:00	08/18/16 10:07
400-125883-13	FERB-1	Water	08/16/16 13:05	08/18/16 10:07

Client Sample Results

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Client Sample ID: MGWA-10

Date Collected: 08/15/16 13:00

Date Received: 08/17/16 09:17

Lab Sample ID: 400-125883-1

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.5		1.0	0.89	mg/L			08/23/16 17:21	1
Fluoride	<0.082		0.20	0.082	mg/L			08/23/16 17:21	1
Sulfate	1.9		1.0	0.70	mg/L			08/23/16 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		08/19/16 09:30	08/22/16 18:33	5
Arsenic	0.00096	J	0.0013	0.00046	mg/L		08/19/16 09:30	08/22/16 18:33	5
Barium	0.029		0.0025	0.00049	mg/L		08/19/16 09:30	08/22/16 18:33	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 18:33	5
Boron	0.022	J	0.050	0.021	mg/L		08/19/16 09:30	08/22/16 18:33	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 18:33	5
Calcium	6.1		0.25	0.13	mg/L		08/19/16 09:30	08/22/16 18:33	5
Chromium	0.0029		0.0025	0.0011	mg/L		08/19/16 09:30	08/22/16 18:33	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/19/16 09:30	08/22/16 18:33	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/16 09:30	08/22/16 18:33	5
Lithium	0.0065		0.0050	0.0032	mg/L		08/19/16 09:30	08/22/16 18:33	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/19/16 09:30	08/22/16 18:33	5
Selenium	0.00062	J	0.0013	0.00024	mg/L		08/19/16 09:30	08/22/16 18:33	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/16 09:30	08/22/16 18:33	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		08/19/16 09:51	08/20/16 19:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	58		5.0	3.4	mg/L			08/19/16 17:19	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Client Sample ID: MGWA-5

Lab Sample ID: 400-125883-2

Date Collected: 08/15/16 13:18

Matrix: Water

Date Received: 08/17/16 09:17

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.4		1.0	0.89	mg/L			08/23/16 18:29	1
Fluoride	0.10	J	0.20	0.082	mg/L			08/23/16 18:29	1
Sulfate	7.5		1.0	0.70	mg/L			08/23/16 18:29	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		08/19/16 09:30	08/22/16 18:38	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/19/16 09:30	08/22/16 18:38	5
Barium	0.032		0.0025	0.00049	mg/L		08/19/16 09:30	08/22/16 18:38	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 18:38	5
Boron	0.023	J	0.050	0.021	mg/L		08/19/16 09:30	08/22/16 18:38	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 18:38	5
Calcium	26		0.25	0.13	mg/L		08/19/16 09:30	08/22/16 18:38	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/16 09:30	08/22/16 18:38	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/19/16 09:30	08/22/16 18:38	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/16 09:30	08/22/16 18:38	5
Lithium	0.0059		0.0050	0.0032	mg/L		08/19/16 09:30	08/22/16 18:38	5
Molybdenum	0.0013	J	0.015	0.00085	mg/L		08/19/16 09:30	08/22/16 18:38	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/19/16 09:30	08/22/16 18:38	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/16 09:30	08/22/16 18:38	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/19/16 09:51	08/20/16 19:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	160		5.0	3.4	mg/L			08/19/16 17:19	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Client Sample ID: MGWA-11

Date Collected: 08/15/16 13:45

Date Received: 08/17/16 09:17

Lab Sample ID: 400-125883-3

Matrix: Water

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			08/23/16 18:52	1
Fluoride	0.10	J	0.20	0.082	mg/L			08/23/16 18:52	1
Sulfate	0.73	J	1.0	0.70	mg/L			08/23/16 18:52	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		08/19/16 09:30	08/22/16 19:00	5
Arsenic	0.0033		0.0013	0.00046	mg/L		08/19/16 09:30	08/22/16 19:00	5
Barium	0.11		0.0025	0.00049	mg/L		08/19/16 09:30	08/22/16 19:00	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:00	5
Boron	0.032	J	0.050	0.021	mg/L		08/19/16 09:30	08/22/16 19:00	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:00	5
Calcium	34		0.25	0.13	mg/L		08/19/16 09:30	08/22/16 19:00	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/16 09:30	08/22/16 19:00	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/19/16 09:30	08/22/16 19:00	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/16 09:30	08/22/16 19:00	5
Lithium	0.020		0.0050	0.0032	mg/L		08/19/16 09:30	08/22/16 19:00	5
Molybdenum	0.0022	J	0.015	0.00085	mg/L		08/19/16 09:30	08/22/16 19:00	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/19/16 09:30	08/22/16 19:00	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/16 09:30	08/22/16 19:00	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000080	J B	0.00020	0.000070	mg/L		08/19/16 09:51	08/20/16 20:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	180		5.0	3.4	mg/L			08/19/16 17:19	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Client Sample ID: MGWA-6

Lab Sample ID: 400-125883-4

Date Collected: 08/15/16 15:05

Matrix: Water

Date Received: 08/17/16 09:17

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10		1.0	0.89	mg/L			08/23/16 19:15	1
Fluoride	<0.082		0.20	0.082	mg/L			08/23/16 19:15	1
Sulfate	20		1.0	0.70	mg/L			08/23/16 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		08/19/16 09:30	08/22/16 19:05	5
Arsenic	0.035		0.0013	0.00046	mg/L		08/19/16 09:30	08/22/16 19:05	5
Barium	0.053		0.0025	0.00049	mg/L		08/19/16 09:30	08/22/16 19:05	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:05	5
Boron	0.18		0.050	0.021	mg/L		08/19/16 09:30	08/22/16 19:05	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:05	5
Calcium	94		0.25	0.13	mg/L		08/19/16 09:30	08/22/16 19:05	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/16 09:30	08/22/16 19:05	5
Cobalt	0.00049 J		0.0025	0.00040	mg/L		08/19/16 09:30	08/22/16 19:05	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/16 09:30	08/22/16 19:05	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/19/16 09:30	08/22/16 19:05	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/19/16 09:30	08/22/16 19:05	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/19/16 09:30	08/22/16 19:05	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/16 09:30	08/22/16 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		08/19/16 09:51	08/20/16 20:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	310		5.0	3.4	mg/L			08/19/16 17:19	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-1
 SDG: AP

Client Sample ID: MGWC-7

Lab Sample ID: 400-125883-5

Date Collected: 08/15/16 15:05

Matrix: Water

Date Received: 08/17/16 09:17

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14		1.0	0.89	mg/L			08/23/16 19:38	1
Fluoride	0.44		0.20	0.082	mg/L			08/23/16 19:38	1
Sulfate	170		5.0	3.5	mg/L			08/25/16 06:21	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		08/19/16 09:30	08/22/16 19:09	5
Arsenic	0.0012	J	0.0013	0.00046	mg/L		08/19/16 09:30	08/22/16 19:09	5
Barium	0.015		0.0025	0.00049	mg/L		08/19/16 09:30	08/22/16 19:09	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:09	5
Boron	1.3		0.050	0.021	mg/L		08/19/16 09:30	08/22/16 19:09	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:09	5
Calcium	50		0.25	0.13	mg/L		08/19/16 09:30	08/22/16 19:09	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/16 09:30	08/22/16 19:09	5
Cobalt	0.0098		0.0025	0.00040	mg/L		08/19/16 09:30	08/22/16 19:09	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/16 09:30	08/22/16 19:09	5
Lithium	0.12		0.0050	0.0032	mg/L		08/19/16 09:30	08/22/16 19:09	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/19/16 09:30	08/22/16 19:09	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/19/16 09:30	08/22/16 19:09	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/16 09:30	08/22/16 19:09	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		08/19/16 09:51	08/20/16 20:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	330		5.0	3.4	mg/L			08/19/16 17:19	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Client Sample ID: MGWC-8

Lab Sample ID: 400-125883-6

Date Collected: 08/15/16 15:40

Matrix: Water

Date Received: 08/17/16 09:17

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.5		1.0	0.89	mg/L			08/23/16 20:01	1
Fluoride	0.11	J	0.20	0.082	mg/L			08/23/16 20:01	1
Sulfate	120		5.0	3.5	mg/L			08/25/16 07:07	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		08/19/16 09:30	08/22/16 19:27	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/19/16 09:30	08/22/16 19:27	5
Barium	0.030		0.0025	0.00049	mg/L		08/19/16 09:30	08/22/16 19:27	5
Beryllium	0.00053	J	0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:27	5
Boron	0.80		0.050	0.021	mg/L		08/19/16 09:30	08/22/16 19:27	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:27	5
Calcium	27		0.25	0.13	mg/L		08/19/16 09:30	08/22/16 19:27	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/16 09:30	08/22/16 19:27	5
Cobalt	0.0038		0.0025	0.00040	mg/L		08/19/16 09:30	08/22/16 19:27	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/16 09:30	08/22/16 19:27	5
Lithium	0.026		0.0050	0.0032	mg/L		08/19/16 09:30	08/22/16 19:27	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/19/16 09:30	08/22/16 19:27	5
Selenium	0.00033	J	0.0013	0.00024	mg/L		08/19/16 09:30	08/22/16 19:27	5
Thallium	0.00016	J	0.00050	0.000085	mg/L		08/19/16 09:30	08/22/16 19:27	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00015	J B	0.00020	0.000070	mg/L		08/19/16 09:51	08/20/16 20:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	230		5.0	3.4	mg/L			08/19/16 17:19	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-1
 SDG: AP

Client Sample ID: DUP-1
Date Collected: 08/15/16 00:00
Date Received: 08/17/16 09:17

Lab Sample ID: 400-125883-7
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10		1.0	0.89	mg/L			08/23/16 20:23	1
Fluoride	<0.082		0.20	0.082	mg/L			08/23/16 20:23	1
Sulfate	20		1.0	0.70	mg/L			08/23/16 20:23	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		08/19/16 09:30	08/22/16 19:32	5
Arsenic	0.039		0.0013	0.00046	mg/L		08/19/16 09:30	08/22/16 19:32	5
Barium	0.055		0.0025	0.00049	mg/L		08/19/16 09:30	08/22/16 19:32	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:32	5
Boron	0.17		0.050	0.021	mg/L		08/19/16 09:30	08/22/16 19:32	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:32	5
Calcium	92		0.25	0.13	mg/L		08/19/16 09:30	08/22/16 19:32	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/16 09:30	08/22/16 19:32	5
Cobalt	0.00044	J	0.0025	0.00040	mg/L		08/19/16 09:30	08/22/16 19:32	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/16 09:30	08/22/16 19:32	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/19/16 09:30	08/22/16 19:32	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/19/16 09:30	08/22/16 19:32	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/19/16 09:30	08/22/16 19:32	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/16 09:30	08/22/16 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		08/19/16 09:51	08/20/16 20:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	310		5.0	3.4	mg/L			08/19/16 17:19	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Client Sample ID: MGWC-1

Lab Sample ID: 400-125883-8

Date Collected: 08/16/16 10:20

Matrix: Water

Date Received: 08/18/16 10:07

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14		1.0	0.89	mg/L			08/23/16 21:32	1
Fluoride	0.27		0.20	0.082	mg/L			08/23/16 21:32	1
Sulfate	120		5.0	3.5	mg/L			08/25/16 07:30	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		08/19/16 09:30	08/22/16 19:36	5
Arsenic	0.0030		0.0013	0.00046	mg/L		08/19/16 09:30	08/22/16 19:36	5
Barium	0.094		0.0025	0.00049	mg/L		08/19/16 09:30	08/22/16 19:36	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:36	5
Boron	0.85		0.050	0.021	mg/L		08/19/16 09:30	08/22/16 19:36	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:36	5
Calcium	84		0.25	0.13	mg/L		08/19/16 09:30	08/22/16 19:36	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/16 09:30	08/22/16 19:36	5
Cobalt	0.00047	J	0.0025	0.00040	mg/L		08/19/16 09:30	08/22/16 19:36	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/16 09:30	08/22/16 19:36	5
Lithium	0.012		0.0050	0.0032	mg/L		08/19/16 09:30	08/22/16 19:36	5
Molybdenum	0.0019	J	0.015	0.00085	mg/L		08/19/16 09:30	08/22/16 19:36	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/19/16 09:30	08/22/16 19:36	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/16 09:30	08/22/16 19:36	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		08/21/16 12:32	08/24/16 09:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	360		5.0	3.4	mg/L			08/20/16 16:18	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Client Sample ID: MGWC-3

Lab Sample ID: 400-125883-9

Date Collected: 08/16/16 09:55

Matrix: Water

Date Received: 08/18/16 10:07

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		1.0	0.89	mg/L			08/23/16 21:55	1
Fluoride	<0.082		0.20	0.082	mg/L			08/23/16 21:55	1
Sulfate	88		5.0	3.5	mg/L			08/25/16 07:52	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		08/19/16 09:30	08/22/16 19:41	5
Arsenic	0.0017		0.0013	0.00046	mg/L		08/19/16 09:30	08/22/16 19:41	5
Barium	0.13		0.0025	0.00049	mg/L		08/19/16 09:30	08/22/16 19:41	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:41	5
Boron	1.0		0.050	0.021	mg/L		08/19/16 09:30	08/22/16 19:41	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:41	5
Calcium	97		0.25	0.13	mg/L		08/19/16 09:30	08/22/16 19:41	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/16 09:30	08/22/16 19:41	5
Cobalt	0.00064	J	0.0025	0.00040	mg/L		08/19/16 09:30	08/22/16 19:41	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/16 09:30	08/22/16 19:41	5
Lithium	0.010		0.0050	0.0032	mg/L		08/19/16 09:30	08/22/16 19:41	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/19/16 09:30	08/22/16 19:41	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/19/16 09:30	08/22/16 19:41	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/16 09:30	08/22/16 19:41	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		08/21/16 12:32	08/24/16 09:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	360		5.0	3.4	mg/L			08/20/16 16:18	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Client Sample ID: MGWC-2

Lab Sample ID: 400-125883-10

Date Collected: 08/16/16 11:55

Matrix: Water

Date Received: 08/18/16 10:07

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20		1.0	0.89	mg/L			08/24/16 04:54	1
Fluoride	0.087	J	0.20	0.082	mg/L			08/24/16 04:54	1
Sulfate	270		10	7.0	mg/L			08/25/16 10:10	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		08/19/16 09:30	08/22/16 19:45	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/19/16 09:30	08/22/16 19:45	5
Barium	0.052		0.0025	0.00049	mg/L		08/19/16 09:30	08/22/16 19:45	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:45	5
Cadmium	0.0034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:45	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/16 09:30	08/22/16 19:45	5
Cobalt	0.0034		0.0025	0.00040	mg/L		08/19/16 09:30	08/22/16 19:45	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/16 09:30	08/22/16 19:45	5
Lithium	0.0043	J	0.0050	0.0032	mg/L		08/19/16 09:30	08/22/16 19:45	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/19/16 09:30	08/22/16 19:45	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/19/16 09:30	08/22/16 19:45	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/16 09:30	08/22/16 19:45	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.8		1.0	0.42	mg/L		08/19/16 09:30	08/23/16 12:47	100
Calcium	120		5.0	2.5	mg/L		08/19/16 09:30	08/23/16 12:47	100

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000078	J	0.00020	0.000070	mg/L		08/21/16 12:32	08/24/16 09:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	650		5.0	3.4	mg/L			08/20/16 16:18	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-1
 SDG: AP

Client Sample ID: MGWC-12

Lab Sample ID: 400-125883-11

Date Collected: 08/16/16 12:50

Matrix: Water

Date Received: 08/18/16 10:07

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.6		1.0	0.89	mg/L			08/24/16 06:48	1
Fluoride	0.29		0.20	0.082	mg/L			08/24/16 06:48	1
Sulfate	2.8		1.0	0.70	mg/L			08/24/16 06:48	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		08/19/16 09:30	08/22/16 19:50	5
Arsenic	0.00082	J	0.0013	0.00046	mg/L		08/19/16 09:30	08/22/16 19:50	5
Barium	0.041		0.0025	0.00049	mg/L		08/19/16 09:30	08/22/16 19:50	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:50	5
Boron	0.055		0.050	0.021	mg/L		08/19/16 09:30	08/22/16 19:50	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:50	5
Calcium	25		0.25	0.13	mg/L		08/19/16 09:30	08/22/16 19:50	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/16 09:30	08/22/16 19:50	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/19/16 09:30	08/22/16 19:50	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/16 09:30	08/22/16 19:50	5
Lithium	0.014		0.0050	0.0032	mg/L		08/19/16 09:30	08/22/16 19:50	5
Molybdenum	0.0012	J	0.015	0.00085	mg/L		08/19/16 09:30	08/22/16 19:50	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/19/16 09:30	08/22/16 19:50	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/16 09:30	08/22/16 19:50	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		08/21/16 12:32	08/24/16 09:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	160		5.0	3.4	mg/L			08/20/16 16:18	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Client Sample ID: FB-1
Date Collected: 08/16/16 13:00
Date Received: 08/18/16 10:07

Lab Sample ID: 400-125883-12
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			08/24/16 07:11	1
Fluoride	<0.082		0.20	0.082	mg/L			08/24/16 07:11	1
Sulfate	<0.70		1.0	0.70	mg/L			08/24/16 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		08/19/16 09:30	08/22/16 19:54	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/19/16 09:30	08/22/16 19:54	5
Barium	<0.00049		0.0025	0.00049	mg/L		08/19/16 09:30	08/22/16 19:54	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:54	5
Boron	<0.021		0.050	0.021	mg/L		08/19/16 09:30	08/22/16 19:54	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:54	5
Calcium	<0.13		0.25	0.13	mg/L		08/19/16 09:30	08/22/16 19:54	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/16 09:30	08/22/16 19:54	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/19/16 09:30	08/22/16 19:54	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/16 09:30	08/22/16 19:54	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/19/16 09:30	08/22/16 19:54	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/19/16 09:30	08/22/16 19:54	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/19/16 09:30	08/22/16 19:54	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/16 09:30	08/22/16 19:54	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000085	J	0.00020	0.000070	mg/L		08/21/16 12:32	08/24/16 09:55	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			08/20/16 16:18	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Client Sample ID: FERB-1

Date Collected: 08/16/16 13:05

Date Received: 08/18/16 10:07

Lab Sample ID: 400-125883-13

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			08/24/16 07:34	1
Fluoride	<0.082		0.20	0.082	mg/L			08/24/16 07:34	1
Sulfate	<0.70		1.0	0.70	mg/L			08/24/16 07:34	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		08/19/16 09:30	08/22/16 19:59	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/19/16 09:30	08/22/16 19:59	5
Barium	0.0018	J	0.0025	0.00049	mg/L		08/19/16 09:30	08/22/16 19:59	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:59	5
Boron	<0.021		0.050	0.021	mg/L		08/19/16 09:30	08/22/16 19:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 19:59	5
Calcium	<0.13		0.25	0.13	mg/L		08/19/16 09:30	08/22/16 19:59	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/16 09:30	08/22/16 19:59	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/19/16 09:30	08/22/16 19:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/16 09:30	08/22/16 19:59	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/19/16 09:30	08/22/16 19:59	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/19/16 09:30	08/22/16 19:59	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/19/16 09:30	08/22/16 19:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/16 09:30	08/22/16 19:59	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000072	J	0.00020	0.000070	mg/L		08/21/16 12:32	08/24/16 09:56	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			08/20/16 16:18	1

Definitions/Glossary

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

TestAmerica Job ID: 400-125883-1
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.
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.
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 McIntosh

TestAmerica Job ID: 400-125883-1
SDG: AP

Client Sample ID: MGWA-10

Date Collected: 08/15/16 13:00

Date Received: 08/17/16 09:17

Lab Sample ID: 400-125883-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319951	08/23/16 17:21	KH1	TAL PEN
Total Recoverable	Prep	3005A			319240	08/19/16 09:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	319655	08/22/16 18:33	RJB	TAL PEN
Total/NA	Prep	7470A			319015	08/19/16 09:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	319487	08/20/16 19:53	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	319351	08/19/16 17:19	TET	TAL PEN

Client Sample ID: MGWA-5

Date Collected: 08/15/16 13:18

Date Received: 08/17/16 09:17

Lab Sample ID: 400-125883-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319951	08/23/16 18:29	KH1	TAL PEN
Total Recoverable	Prep	3005A			319240	08/19/16 09:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	319655	08/22/16 18:38	RJB	TAL PEN
Total/NA	Prep	7470A			319015	08/19/16 09:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	319487	08/20/16 19:58	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	319351	08/19/16 17:19	TET	TAL PEN

Client Sample ID: MGWA-11

Date Collected: 08/15/16 13:45

Date Received: 08/17/16 09:17

Lab Sample ID: 400-125883-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319951	08/23/16 18:52	KH1	TAL PEN
Total Recoverable	Prep	3005A			319240	08/19/16 09:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	319655	08/22/16 19:00	RJB	TAL PEN
Total/NA	Prep	7470A			319015	08/19/16 09:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	319487	08/20/16 20:00	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	319351	08/19/16 17:19	TET	TAL PEN

Client Sample ID: MGWA-6

Date Collected: 08/15/16 15:05

Date Received: 08/17/16 09:17

Lab Sample ID: 400-125883-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319951	08/23/16 19:15	KH1	TAL PEN
Total Recoverable	Prep	3005A			319240	08/19/16 09:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	319655	08/22/16 19:05	RJB	TAL PEN
Total/NA	Prep	7470A			319015	08/19/16 09:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	319487	08/20/16 20:02	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	319351	08/19/16 17:19	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Client Sample ID: MGWC-7

Date Collected: 08/15/16 15:05

Date Received: 08/17/16 09:17

Lab Sample ID: 400-125883-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319951	08/23/16 19:38	KH1	TAL PEN
Total/NA	Analysis	300.0		5	320190	08/25/16 06:21	DHW	TAL PEN
Total Recoverable	Prep	3005A			319240	08/19/16 09:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	319655	08/22/16 19:09	RJB	TAL PEN
Total/NA	Prep	7470A			319015	08/19/16 09:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	319487	08/20/16 20:03	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	319351	08/19/16 17:19	TET	TAL PEN

Client Sample ID: MGWC-8

Date Collected: 08/15/16 15:40

Date Received: 08/17/16 09:17

Lab Sample ID: 400-125883-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319951	08/23/16 20:01	KH1	TAL PEN
Total/NA	Analysis	300.0		5	320190	08/25/16 07:07	DHW	TAL PEN
Total Recoverable	Prep	3005A			319240	08/19/16 09:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	319655	08/22/16 19:27	RJB	TAL PEN
Total/NA	Prep	7470A			319015	08/19/16 09:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	319487	08/20/16 20:04	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	319351	08/19/16 17:19	TET	TAL PEN

Client Sample ID: DUP-1

Date Collected: 08/15/16 00:00

Date Received: 08/17/16 09:17

Lab Sample ID: 400-125883-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319951	08/23/16 20:23	KH1	TAL PEN
Total Recoverable	Prep	3005A			319240	08/19/16 09:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	319655	08/22/16 19:32	RJB	TAL PEN
Total/NA	Prep	7470A			319015	08/19/16 09:51	JAP	TAL PEN
Total/NA	Analysis	7470A		1	319487	08/20/16 20:11	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	319351	08/19/16 17:19	TET	TAL PEN

Client Sample ID: MGWC-1

Date Collected: 08/16/16 10:20

Date Received: 08/18/16 10:07

Lab Sample ID: 400-125883-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319951	08/23/16 21:32	KH1	TAL PEN
Total/NA	Analysis	300.0		5	320190	08/25/16 07:30	DHW	TAL PEN
Total Recoverable	Prep	3005A			319240	08/19/16 09:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	319655	08/22/16 19:36	RJB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Client Sample ID: MGWC-1

Lab Sample ID: 400-125883-8

Date Collected: 08/16/16 10:20

Matrix: Water

Date Received: 08/18/16 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			319456	08/21/16 12:32	DN1	TAL PEN
Total/NA	Analysis	7470A		1	319948	08/24/16 09:36	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	319415	08/20/16 16:18	TET	TAL PEN

Client Sample ID: MGWC-3

Lab Sample ID: 400-125883-9

Date Collected: 08/16/16 09:55

Matrix: Water

Date Received: 08/18/16 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319951	08/23/16 21:55	KH1	TAL PEN
Total/NA	Analysis	300.0		5	320190	08/25/16 07:52	DHW	TAL PEN
Total Recoverable	Prep	3005A			319240	08/19/16 09:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	319655	08/22/16 19:41	RJB	TAL PEN
Total/NA	Prep	7470A			319456	08/21/16 12:32	DN1	TAL PEN
Total/NA	Analysis	7470A		1	319948	08/24/16 09:41	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	319415	08/20/16 16:18	TET	TAL PEN

Client Sample ID: MGWC-2

Lab Sample ID: 400-125883-10

Date Collected: 08/16/16 11:55

Matrix: Water

Date Received: 08/18/16 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319972	08/24/16 04:54	KH1	TAL PEN
Total/NA	Analysis	300.0		10	320190	08/25/16 10:10	DHW	TAL PEN
Total Recoverable	Prep	3005A			319240	08/19/16 09:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	319655	08/22/16 19:45	RJB	TAL PEN
Total Recoverable	Prep	3005A	DL		319240	08/19/16 09:30	RJB	TAL PEN
Total Recoverable	Analysis	6020	DL	100	319843	08/23/16 12:47	RJB	TAL PEN
Total/NA	Prep	7470A			319456	08/21/16 12:32	DN1	TAL PEN
Total/NA	Analysis	7470A		1	319948	08/24/16 09:43	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	319415	08/20/16 16:18	TET	TAL PEN

Client Sample ID: MGWC-12

Lab Sample ID: 400-125883-11

Date Collected: 08/16/16 12:50

Matrix: Water

Date Received: 08/18/16 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319972	08/24/16 06:48	KH1	TAL PEN
Total Recoverable	Prep	3005A			319240	08/19/16 09:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	319655	08/22/16 19:50	RJB	TAL PEN
Total/NA	Prep	7470A			319456	08/21/16 12:32	DN1	TAL PEN
Total/NA	Analysis	7470A		1	319948	08/24/16 09:53	JAP	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Client Sample ID: MGWC-12

Lab Sample ID: 400-125883-11

Date Collected: 08/16/16 12:50

Matrix: Water

Date Received: 08/18/16 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	319415	08/20/16 16:18	TET	TAL PEN

Client Sample ID: FB-1

Lab Sample ID: 400-125883-12

Date Collected: 08/16/16 13:00

Matrix: Water

Date Received: 08/18/16 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319972	08/24/16 07:11	KH1	TAL PEN
Total Recoverable	Prep	3005A			319240	08/19/16 09:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	319655	08/22/16 19:54	RJB	TAL PEN
Total/NA	Prep	7470A			319456	08/21/16 12:32	DN1	TAL PEN
Total/NA	Analysis	7470A		1	319948	08/24/16 09:55	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	319415	08/20/16 16:18	TET	TAL PEN

Client Sample ID: FERB-1

Lab Sample ID: 400-125883-13

Date Collected: 08/16/16 13:05

Matrix: Water

Date Received: 08/18/16 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	319972	08/24/16 07:34	KH1	TAL PEN
Total Recoverable	Prep	3005A			319240	08/19/16 09:30	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	319655	08/22/16 19:59	RJB	TAL PEN
Total/NA	Prep	7470A			319456	08/21/16 12:32	DN1	TAL PEN
Total/NA	Analysis	7470A		1	319948	08/24/16 09:56	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	319415	08/20/16 16:18	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 McIntosh

TestAmerica Job ID: 400-125883-1
SDG: AP

HPLC/IC

Analysis Batch: 319951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125883-1	MGWA-10	Total/NA	Water	300.0	
400-125883-2	MGWA-5	Total/NA	Water	300.0	
400-125883-3	MGWA-11	Total/NA	Water	300.0	
400-125883-4	MGWA-6	Total/NA	Water	300.0	
400-125883-5	MGWC-7	Total/NA	Water	300.0	
400-125883-6	MGWC-8	Total/NA	Water	300.0	
400-125883-7	DUP-1	Total/NA	Water	300.0	
400-125883-8	MGWC-1	Total/NA	Water	300.0	
400-125883-9	MGWC-3	Total/NA	Water	300.0	
MB 400-319951/6	Method Blank	Total/NA	Water	300.0	
LCS 400-319951/10	Lab Control Sample	Total/NA	Water	300.0	
400-125883-1 MS	MGWA-10	Total/NA	Water	300.0	
400-125883-1 MSD	MGWA-10	Total/NA	Water	300.0	

Analysis Batch: 319972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125883-10	MGWC-2	Total/NA	Water	300.0	
400-125883-11	MGWC-12	Total/NA	Water	300.0	
400-125883-12	FB-1	Total/NA	Water	300.0	
400-125883-13	FERB-1	Total/NA	Water	300.0	
MB 400-319972/38	Method Blank	Total/NA	Water	300.0	
LCS 400-319972/39	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-319972/40	Lab Control Sample Dup	Total/NA	Water	300.0	
400-125883-10 MS	MGWC-2	Total/NA	Water	300.0	
400-125883-10 MSD	MGWC-2	Total/NA	Water	300.0	

Analysis Batch: 320190

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125883-5	MGWC-7	Total/NA	Water	300.0	
400-125883-6	MGWC-8	Total/NA	Water	300.0	
400-125883-8	MGWC-1	Total/NA	Water	300.0	
400-125883-9	MGWC-3	Total/NA	Water	300.0	
400-125883-10	MGWC-2	Total/NA	Water	300.0	
MB 400-320190/85	Method Blank	Total/NA	Water	300.0	
LCS 400-320190/86	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-320190/87	Lab Control Sample Dup	Total/NA	Water	300.0	
400-125883-5 MS	MGWC-7	Total/NA	Water	300.0	
400-126027-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 319015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125883-1	MGWA-10	Total/NA	Water	7470A	
400-125883-2	MGWA-5	Total/NA	Water	7470A	
400-125883-3	MGWA-11	Total/NA	Water	7470A	
400-125883-4	MGWA-6	Total/NA	Water	7470A	
400-125883-5	MGWC-7	Total/NA	Water	7470A	
400-125883-6	MGWC-8	Total/NA	Water	7470A	
400-125883-7	DUP-1	Total/NA	Water	7470A	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Metals (Continued)

Prep Batch: 319015 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-319015/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-319015/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-125883-1 MS	MGWA-10	Total/NA	Water	7470A	
400-125883-1 MSD	MGWA-10	Total/NA	Water	7470A	

Prep Batch: 319240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125883-1	MGWA-10	Total Recoverable	Water	3005A	
400-125883-2	MGWA-5	Total Recoverable	Water	3005A	
400-125883-3	MGWA-11	Total Recoverable	Water	3005A	
400-125883-4	MGWA-6	Total Recoverable	Water	3005A	
400-125883-5	MGWC-7	Total Recoverable	Water	3005A	
400-125883-6	MGWC-8	Total Recoverable	Water	3005A	
400-125883-7	DUP-1	Total Recoverable	Water	3005A	
400-125883-8	MGWC-1	Total Recoverable	Water	3005A	
400-125883-9	MGWC-3	Total Recoverable	Water	3005A	
400-125883-10	MGWC-2	Total Recoverable	Water	3005A	
400-125883-10 - DL	MGWC-2	Total Recoverable	Water	3005A	
400-125883-11	MGWC-12	Total Recoverable	Water	3005A	
400-125883-12	FB-1	Total Recoverable	Water	3005A	
400-125883-13	FERB-1	Total Recoverable	Water	3005A	
MB 400-319240/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-319240/2-A ^1	Lab Control Sample	Total Recoverable	Water	3005A	
400-125883-2 MS	MGWA-5	Total Recoverable	Water	3005A	
400-125883-2 MSD	MGWA-5	Total Recoverable	Water	3005A	

Prep Batch: 319456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125883-8	MGWC-1	Total/NA	Water	7470A	
400-125883-9	MGWC-3	Total/NA	Water	7470A	
400-125883-10	MGWC-2	Total/NA	Water	7470A	
400-125883-11	MGWC-12	Total/NA	Water	7470A	
400-125883-12	FB-1	Total/NA	Water	7470A	
400-125883-13	FERB-1	Total/NA	Water	7470A	
MB 400-319456/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-319456/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-125883-8 MS	MGWC-1	Total/NA	Water	7470A	
400-125883-8 MSD	MGWC-1	Total/NA	Water	7470A	

Analysis Batch: 319487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125883-1	MGWA-10	Total/NA	Water	7470A	319015
400-125883-2	MGWA-5	Total/NA	Water	7470A	319015
400-125883-3	MGWA-11	Total/NA	Water	7470A	319015
400-125883-4	MGWA-6	Total/NA	Water	7470A	319015
400-125883-5	MGWC-7	Total/NA	Water	7470A	319015
400-125883-6	MGWC-8	Total/NA	Water	7470A	319015
400-125883-7	DUP-1	Total/NA	Water	7470A	319015
MB 400-319015/14-A	Method Blank	Total/NA	Water	7470A	319015
LCS 400-319015/15-A	Lab Control Sample	Total/NA	Water	7470A	319015
400-125883-1 MS	MGWA-10	Total/NA	Water	7470A	319015

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Metals (Continued)

Analysis Batch: 319487 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125883-1 MSD	MGWA-10	Total/NA	Water	7470A	319015

Analysis Batch: 319655

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125883-1	MGWA-10	Total Recoverable	Water	6020	319240
400-125883-2	MGWA-5	Total Recoverable	Water	6020	319240
400-125883-3	MGWA-11	Total Recoverable	Water	6020	319240
400-125883-4	MGWA-6	Total Recoverable	Water	6020	319240
400-125883-5	MGWC-7	Total Recoverable	Water	6020	319240
400-125883-6	MGWC-8	Total Recoverable	Water	6020	319240
400-125883-7	DUP-1	Total Recoverable	Water	6020	319240
400-125883-8	MGWC-1	Total Recoverable	Water	6020	319240
400-125883-9	MGWC-3	Total Recoverable	Water	6020	319240
400-125883-10	MGWC-2	Total Recoverable	Water	6020	319240
400-125883-11	MGWC-12	Total Recoverable	Water	6020	319240
400-125883-12	FB-1	Total Recoverable	Water	6020	319240
400-125883-13	FERB-1	Total Recoverable	Water	6020	319240
MB 400-319240/1-A ^5	Method Blank	Total Recoverable	Water	6020	319240
LCS 400-319240/2-A ^1	Lab Control Sample	Total Recoverable	Water	6020	319240
400-125883-2 MS	MGWA-5	Total Recoverable	Water	6020	319240
400-125883-2 MSD	MGWA-5	Total Recoverable	Water	6020	319240

Analysis Batch: 319843

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125883-10 - DL	MGWC-2	Total Recoverable	Water	6020	319240

Analysis Batch: 319948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125883-8	MGWC-1	Total/NA	Water	7470A	319456
400-125883-9	MGWC-3	Total/NA	Water	7470A	319456
400-125883-10	MGWC-2	Total/NA	Water	7470A	319456
400-125883-11	MGWC-12	Total/NA	Water	7470A	319456
400-125883-12	FB-1	Total/NA	Water	7470A	319456
400-125883-13	FERB-1	Total/NA	Water	7470A	319456
MB 400-319456/14-A	Method Blank	Total/NA	Water	7470A	319456
LCS 400-319456/15-A	Lab Control Sample	Total/NA	Water	7470A	319456
400-125883-8 MS	MGWC-1	Total/NA	Water	7470A	319456
400-125883-8 MSD	MGWC-1	Total/NA	Water	7470A	319456

General Chemistry

Analysis Batch: 319351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125883-1	MGWA-10	Total/NA	Water	SM 2540C	
400-125883-2	MGWA-5	Total/NA	Water	SM 2540C	
400-125883-3	MGWA-11	Total/NA	Water	SM 2540C	
400-125883-4	MGWA-6	Total/NA	Water	SM 2540C	
400-125883-5	MGWC-7	Total/NA	Water	SM 2540C	
400-125883-6	MGWC-8	Total/NA	Water	SM 2540C	
400-125883-7	DUP-1	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-125883-1
SDG: AP

General Chemistry (Continued)

Analysis Batch: 319351 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-319351/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-319351/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-125883-2 DU	MGWA-5	Total/NA	Water	SM 2540C	

Analysis Batch: 319415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125883-8	MGWC-1	Total/NA	Water	SM 2540C	
400-125883-9	MGWC-3	Total/NA	Water	SM 2540C	
400-125883-10	MGWC-2	Total/NA	Water	SM 2540C	
400-125883-11	MGWC-12	Total/NA	Water	SM 2540C	
400-125883-12	FB-1	Total/NA	Water	SM 2540C	
400-125883-13	FERB-1	Total/NA	Water	SM 2540C	
MB 400-319415/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-319415/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-125883-8 DU	MGWC-1	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-319951/6
Matrix: Water
Analysis Batch: 319951

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			08/23/16 15:04	1
Fluoride	<0.082		0.20	0.082	mg/L			08/23/16 15:04	1
Sulfate	<0.70		1.0	0.70	mg/L			08/23/16 15:04	1

Lab Sample ID: LCS 400-319951/10
Matrix: Water
Analysis Batch: 319951

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	9.50		mg/L		95	90 - 110

Lab Sample ID: 400-125883-1 MS
Matrix: Water
Analysis Batch: 319951

Client Sample ID: MGWA-10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.5		10.0	17.9		mg/L		104	80 - 120
Fluoride	<0.082		10.0	10.9		mg/L		109	80 - 120
Sulfate	1.9		10.0	12.5		mg/L		106	80 - 120

Lab Sample ID: 400-125883-1 MSD
Matrix: Water
Analysis Batch: 319951

Client Sample ID: MGWA-10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chloride	7.5		10.0	17.9		mg/L		104	80 - 120	0	20
Fluoride	<0.082		10.0	10.9		mg/L		109	80 - 120	0	20
Sulfate	1.9		10.0	12.5		mg/L		105	80 - 120	0	20

Lab Sample ID: MB 400-319972/38
Matrix: Water
Analysis Batch: 319972

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			08/24/16 03:45	1
Fluoride	<0.082		0.20	0.082	mg/L			08/24/16 03:45	1
Sulfate	<0.70		1.0	0.70	mg/L			08/24/16 03:45	1

Lab Sample ID: LCS 400-319972/39
Matrix: Water
Analysis Batch: 319972

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	9.86		mg/L		99	90 - 110
Fluoride	10.0	10.2		mg/L		102	90 - 110
Sulfate	10.0	9.46		mg/L		95	90 - 110

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 400-319972/40

Matrix: Water
Analysis Batch: 319972

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	10.3		mg/L		103	90 - 110	1	15
Sulfate	10.0	9.26		mg/L		93	90 - 110	2	15

Lab Sample ID: 400-125883-10 MS

Matrix: Water
Analysis Batch: 319972

Client Sample ID: MGWC-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	20		10.0	30.2		mg/L		101	80 - 120		
Fluoride	0.087	J	10.0	11.0		mg/L		109	80 - 120		
Sulfate	260	E	10.0	273	E 4	mg/L		91	80 - 120		

Lab Sample ID: 400-125883-10 MSD

Matrix: Water
Analysis Batch: 319972

Client Sample ID: MGWC-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	20		10.0	30.1		mg/L		100	80 - 120	0	20
Fluoride	0.087	J	10.0	11.0		mg/L		109	80 - 120	0	20
Sulfate	260	E	10.0	279	E 4	mg/L		149	80 - 120	2	20

Lab Sample ID: MB 400-320190/85

Matrix: Water
Analysis Batch: 320190

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			08/24/16 23:53	1
Fluoride	<0.082		0.20	0.082	mg/L			08/24/16 23:53	1
Sulfate	<0.70		1.0	0.70	mg/L			08/24/16 23:53	1

Lab Sample ID: LCS 400-320190/86

Matrix: Water
Analysis Batch: 320190

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	9.82		mg/L		98	90 - 110		
Fluoride	10.0	10.1		mg/L		101	90 - 110		
Sulfate	10.0	9.47		mg/L		95	90 - 110		

Lab Sample ID: LCSD 400-320190/87

Matrix: Water
Analysis Batch: 320190

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	10.1		mg/L		101	90 - 110	1	15
Sulfate	10.0	9.45		mg/L		95	90 - 110	0	15

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 400-125883-5 MS
Matrix: Water
Analysis Batch: 320190

Client Sample ID: MGWC-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	14		50.0	67.3		mg/L		106	80 - 120
Fluoride	0.49	J	50.0	56.1		mg/L		111	80 - 120
Sulfate	170		50.0	214		mg/L		95	80 - 120

Lab Sample ID: 400-126027-A-1 MSD
Matrix: Water
Analysis Batch: 320190

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	10.4		mg/L		104	80 - 120	0	20
Fluoride	<0.082		10.0	10.9		mg/L		109	80 - 120	1	20
Sulfate	<0.70		10.0	10.1		mg/L		101	80 - 120	1	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-319240/1-A ^5
Matrix: Water
Analysis Batch: 319655

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 319240

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		08/19/16 09:30	08/22/16 18:11	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		08/19/16 09:30	08/22/16 18:11	5
Barium	<0.00049		0.0025	0.00049	mg/L		08/19/16 09:30	08/22/16 18:11	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 18:11	5
Boron	<0.021		0.050	0.021	mg/L		08/19/16 09:30	08/22/16 18:11	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		08/19/16 09:30	08/22/16 18:11	5
Calcium	<0.13		0.25	0.13	mg/L		08/19/16 09:30	08/22/16 18:11	5
Chromium	<0.0011		0.0025	0.0011	mg/L		08/19/16 09:30	08/22/16 18:11	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		08/19/16 09:30	08/22/16 18:11	5
Lead	<0.00035		0.0013	0.00035	mg/L		08/19/16 09:30	08/22/16 18:11	5
Lithium	<0.0032		0.0050	0.0032	mg/L		08/19/16 09:30	08/22/16 18:11	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		08/19/16 09:30	08/22/16 18:11	5
Selenium	<0.00024		0.0013	0.00024	mg/L		08/19/16 09:30	08/22/16 18:11	5
Thallium	<0.000085		0.00050	0.000085	mg/L		08/19/16 09:30	08/22/16 18:11	5

Lab Sample ID: LCS 400-319240/2-A ^1
Matrix: Water
Analysis Batch: 319655

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 319240

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0539		mg/L		108	80 - 120
Arsenic	0.0500	0.0551		mg/L		110	80 - 120
Barium	0.0500	0.0460		mg/L		92	80 - 120
Beryllium	0.0500	0.0515		mg/L		103	80 - 120
Boron	0.100	0.108		mg/L		108	80 - 120
Cadmium	0.0500	0.0535		mg/L		107	80 - 120
Calcium	5.00	4.71		mg/L		94	80 - 120
Chromium	0.0500	0.0514		mg/L		103	80 - 120

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-125883-1
SDG: AP

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

Lab Sample ID: LCS 400-319240/2-A ^1
Matrix: Water
Analysis Batch: 319655

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 319240

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.0500	0.0507		mg/L		101	80 - 120
Lead	0.0500	0.0507		mg/L		101	80 - 120
Lithium	0.0500	0.0519		mg/L		104	80 - 120
Molybdenum	0.0500	0.0525		mg/L		105	80 - 120
Selenium	0.0500	0.0524		mg/L		105	80 - 120
Thallium	0.0100	0.0103		mg/L		103	80 - 120

Lab Sample ID: 400-125883-2 MS
Matrix: Water
Analysis Batch: 319655

Client Sample ID: MGWA-5
Prep Type: Total Recoverable
Prep Batch: 319240

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0566		mg/L		113	75 - 125
Arsenic	<0.00046		0.0500	0.0583		mg/L		117	75 - 125
Barium	0.032		0.0500	0.0796		mg/L		95	75 - 125
Beryllium	<0.00034		0.0500	0.0536		mg/L		107	75 - 125
Boron	0.023	J	0.100	0.146		mg/L		123	75 - 125
Cadmium	<0.00034		0.0500	0.0566		mg/L		113	75 - 125
Calcium	26		5.00	31.0	4	mg/L		103	75 - 125
Chromium	<0.0011		0.0500	0.0528		mg/L		106	75 - 125
Cobalt	<0.00040		0.0500	0.0518		mg/L		104	75 - 125
Lead	<0.00035		0.0500	0.0528		mg/L		106	75 - 125
Lithium	0.0059		0.0500	0.0597		mg/L		108	75 - 125
Molybdenum	0.0013	J	0.0500	0.0555		mg/L		108	75 - 125
Selenium	<0.00024		0.0500	0.0536		mg/L		107	75 - 125
Thallium	<0.00085		0.0100	0.0107		mg/L		107	75 - 125

Lab Sample ID: 400-125883-2 MSD
Matrix: Water
Analysis Batch: 319655

Client Sample ID: MGWA-5
Prep Type: Total Recoverable
Prep Batch: 319240

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	<0.0010		0.0500	0.0539		mg/L		108	75 - 125	5	20
Arsenic	<0.00046		0.0500	0.0570		mg/L		114	75 - 125	2	20
Barium	0.032		0.0500	0.0764		mg/L		89	75 - 125	4	20
Beryllium	<0.00034		0.0500	0.0526		mg/L		105	75 - 125	2	20
Boron	0.023	J	0.100	0.139		mg/L		116	75 - 125	5	20
Cadmium	<0.00034		0.0500	0.0563		mg/L		113	75 - 125	1	20
Calcium	26		5.00	31.0	4	mg/L		102	75 - 125	0	20
Chromium	<0.0011		0.0500	0.0518		mg/L		104	75 - 125	2	20
Cobalt	<0.00040		0.0500	0.0521		mg/L		104	75 - 125	1	20
Lead	<0.00035		0.0500	0.0518		mg/L		104	75 - 125	2	20
Lithium	0.0059		0.0500	0.0571		mg/L		102	75 - 125	4	20
Molybdenum	0.0013	J	0.0500	0.0537		mg/L		105	75 - 125	3	20
Selenium	<0.00024		0.0500	0.0534		mg/L		107	75 - 125	0	20
Thallium	<0.00085		0.0100	0.0105		mg/L		105	75 - 125	2	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-125883-1
SDG: AP

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-319015/14-A
Matrix: Water
Analysis Batch: 319487

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 319015

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000129	J	0.00020	0.000070	mg/L		08/19/16 09:51	08/20/16 19:33	1

Lab Sample ID: LCS 400-319015/15-A
Matrix: Water
Analysis Batch: 319487

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 319015

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.000880		mg/L		87	80 - 120

Lab Sample ID: 400-125883-1 MS
Matrix: Water
Analysis Batch: 319487

Client Sample ID: MGWA-10
Prep Type: Total/NA
Prep Batch: 319015

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00177		mg/L		88	80 - 120

Lab Sample ID: 400-125883-1 MSD
Matrix: Water
Analysis Batch: 319487

Client Sample ID: MGWA-10
Prep Type: Total/NA
Prep Batch: 319015

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00179		mg/L		89	80 - 120	1	20

Lab Sample ID: MB 400-319456/14-A
Matrix: Water
Analysis Batch: 319948

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 319456

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		08/21/16 12:32	08/24/16 09:31	1

Lab Sample ID: LCS 400-319456/15-A
Matrix: Water
Analysis Batch: 319948

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 319456

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00103		mg/L		103	80 - 120

Lab Sample ID: 400-125883-8 MS
Matrix: Water
Analysis Batch: 319948

Client Sample ID: MGWC-1
Prep Type: Total/NA
Prep Batch: 319456

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00195		mg/L		97	80 - 120

Lab Sample ID: 400-125883-8 MSD
Matrix: Water
Analysis Batch: 319948

Client Sample ID: MGWC-1
Prep Type: Total/NA
Prep Batch: 319456

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	1	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-125883-1
 SDG: AP

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

Lab Sample ID: MB 400-319351/1
Matrix: Water
Analysis Batch: 319351

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			08/19/16 17:19	1

Lab Sample ID: LCS 400-319351/2
Matrix: Water
Analysis Batch: 319351

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: 400-125883-2 DU
Matrix: Water
Analysis Batch: 319351

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	160		160		mg/L		0	5

Lab Sample ID: MB 400-319415/1
Matrix: Water
Analysis Batch: 319415

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			08/20/16 16:18	1

Lab Sample ID: LCS 400-319415/2
Matrix: Water
Analysis Batch: 319415

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: 400-125883-8 DU
Matrix: Water
Analysis Batch: 319415

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	360		360		mg/L		0	5

Chain of Custody Record

Client Information Client Contact: Jolij 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 McIntosh Site: AP		Lab P/N: Whitnire, Cheyenne R E-Mail: cheyenne.whitnire@testamericainc.com Due Date Requested: TAT Requested (days): PO #: WO #: Project #: SSOW #:		Sampler: ERM Phone: Carrier Tracking No(s): COC No: 400-57303-24790.1 Page: 1 of 1 Job #:						
Analysis Requested TDS - SM 2540G : Cl,F,S,O4 - EPA 300 Metals Appendix III & IV - EPA 6020 & EPA 7470 Radium 226 & 228 - SW-846 9315 & 9320		Analysis Requested Total Number of Containers		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)						
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=water/soil, BT=tissue, A=air)	Field Filtered Sample (Yes or No)	Method (MSD, Resol No)	D	D	D	Special Instructions/Note:
MGWA-10	8/15/16	1300	G	Water						
MGWA-5	8/15/16	1318	G	Water						
MGWA-11	8/15/16	1345	G	Water						
MGWA-6	8/15/16	1505	G	Water						
MGWC-7	8/15/16	1505	G	Water						
MGWC-8	8/15/16	1540	G	Water						
DUP-1	8/15/16	---	G	Water						
				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: _____ Date: _____

Relinquished by: *[Signature]* Date/Time: 8/15/16 1750
 Company: ERM

Relinquished by: *[Signature]* Date/Time: 8/15/16 1750
 Company: ERM

Relinquished by: _____ Date/Time: _____
 Company: _____

Custody Seals Intact: _____ Custody Seal No.: _____
 Δ Yes Δ No

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months


Special Instructions/QC Requirements: 54/S&CF

Method of Shipment: _____

Received by: *[Signature]* Date/Time: 8/15/16 1750
 Company: TA-SA



Chain of Custody Record

Client Information Client Contact: Jojiu 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 McIntosh CCR: AP Site:		Lab PIV: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Sampler: ERM Phone:		Carrier Tracking No(s): COC No: 400-57303-24790.1 Page: 1081 Job #: 125883	
Due Date Requested: TAT Requested (days): PO #: W/O #: Project #: SSOW#:		Analysis Requested 400-125883 COC 			
Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Performance/MSD (Yes or No) <input checked="" type="checkbox"/> TDS - SM 2540C ; Cl,F,S04 - EPA 300 Metals Appendix III & IV - EPA 6020 & EPA 7470 Radium 226 & 228 - SW-846 9315 & 9320		Total Number of Containers			
Sample Identification Sample Date Sample Time Sample Type (C=comp, G=grab) Matrix (W=water, S=solid, G=water/oil, BTP=tissue, A=air) Preservation Code		Special Instructions/Note: Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH R - Na2SO3 S - H2SO4 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 X - EDTA Z - other (specify)			
Possible Hazard Identification <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		Sample Disposal (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 <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: I, II, III, IV, Other (specify) Empty Kit Relinquished by:		Special Instructions/QC Requirements: Method of Shipment:			
Relinquished by: <i>Jojiu Abraham</i> Relinquished by: <i>Jojiu Abraham</i> Relinquished by:		Received by: <i>[Signature]</i> Received by: <i>[Signature]</i> Received by:			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 0.0°C IR6			



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-125883-1

SDG Number: AP

Login Number: 125883

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR-5, 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 McIntosh

TestAmerica Job ID: 400-125883-1
 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	09-01-16
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: 400-125883-2

TestAmerica Sample Delivery Group: AP

Client Project/Site: CCR - Plant McIntosh

For:

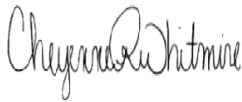
Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

9/22/2016 5:05:25 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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

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

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Case Narrative

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

TestAmerica Job ID: 400-125883-2
SDG: AP

Job ID: 400-125883-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-125883-2

RAD

Method(s) 9315: Radium-226 Prep Batch 160-266813: The following samples have an RER (replicate error ratio) result outside of the acceptance criteria of 1 (1.48) for radium-226. Duplicate precision is demonstrated by acceptable relative percent difference (RPD), within the limit of 40% (30%). The data have been qualified and reported. MGWA-10 (400-125883-1), MGWA-5 (400-125883-2), MGWA-11 (400-125883-3), MGWA-6 (400-125883-4), MGWC-7 (400-125883-5), MGWC-8 (400-125883-6), DUP-1 (400-125883-7), MGWC-1 (400-125883-8), MGWC-3 (400-125883-9), MGWC-2 (400-125883-10), MGWC-12 (400-125883-11), FB-1 (400-125883-12), FERB-1 (400-125883-13), (LCS 160-266813/2-A), (LCSD 160-266813/3-A) and (MB 160-266813/1-A)

Method(s) PrecSep_0: Radium-228 preparation batch 160-266825. Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: MGWA-10 (400-125883-1), MGWA-5 (400-125883-2), MGWA-11 (400-125883-3), MGWA-6 (400-125883-4), MGWC-7 (400-125883-5), MGWC-8 (400-125883-6), DUP-1 (400-125883-7), MGWC-1 (400-125883-8), MGWC-3 (400-125883-9), MGWC-2 (400-125883-10), MGWC-12 (400-125883-11), FB-1 (400-125883-12) and FERB-1 (400-125883-13). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision. Lot 400-126078 was run at a reduced aliquot due to limited sample available.

Method(s) PrecSep-21: Radium-226 preparation batch 160-266813. Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: MGWA-10 (400-125883-1), MGWA-5 (400-125883-2), MGWA-11 (400-125883-3), MGWA-6 (400-125883-4), MGWC-7 (400-125883-5), MGWC-8 (400-125883-6), DUP-1 (400-125883-7), MGWC-1 (400-125883-8), MGWC-3 (400-125883-9), MGWC-2 (400-125883-10), MGWC-12 (400-125883-11), FB-1 (400-125883-12) and FERB-1 (400-125883-13). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision. Lot 400-126078 was run at a reduced aliquot due to limited sample available.

Method Summary

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

TestAmerica Job ID: 400-125883-2
SDG: AP

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 McIntosh

TestAmerica Job ID: 400-125883-2
SDG: AP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-125883-1	MGWA-10	Water	08/15/16 13:00	08/17/16 09:17
400-125883-2	MGWA-5	Water	08/15/16 13:18	08/17/16 09:17
400-125883-3	MGWA-11	Water	08/15/16 13:45	08/17/16 09:17
400-125883-4	MGWA-6	Water	08/15/16 15:05	08/17/16 09:17
400-125883-5	MGWC-7	Water	08/15/16 15:05	08/17/16 09:17
400-125883-6	MGWC-8	Water	08/15/16 15:40	08/17/16 09:17
400-125883-7	DUP-1	Water	08/15/16 00:00	08/17/16 09:17
400-125883-8	MGWC-1	Water	08/16/16 10:20	08/18/16 10:07
400-125883-9	MGWC-3	Water	08/16/16 09:55	08/18/16 10:07
400-125883-10	MGWC-2	Water	08/16/16 11:55	08/18/16 10:07
400-125883-11	MGWC-12	Water	08/16/16 12:50	08/18/16 10:07
400-125883-12	FB-1	Water	08/16/16 13:00	08/18/16 10:07
400-125883-13	FERB-1	Water	08/16/16 13:05	08/18/16 10:07

Client Sample Results

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

TestAmerica Job ID: 400-125883-2
SDG: AP

Client Sample ID: MGWA-10

Lab Sample ID: 400-125883-1

Date Collected: 08/15/16 13:00

Matrix: Water

Date Received: 08/17/16 09:17

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.415	*	0.0979	0.105	1.00	0.0795	pCi/L	08/26/16 16:00	09/19/16 09:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					08/26/16 16:00	09/19/16 09:36	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.162	U	0.229	0.229	1.00	0.382	pCi/L	08/26/16 22:38	09/13/16 12:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.5		40 - 110					08/26/16 22:38	09/13/16 12:46	1
Y Carrier	93.1		40 - 110					08/26/16 22:38	09/13/16 12:46	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	0.577		0.249	0.252	5.00	0.382	pCi/L		09/21/16 18:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-2
 SDG: AP

Client Sample ID: MGWA-5

Lab Sample ID: 400-125883-2

Date Collected: 08/15/16 13:18

Matrix: Water

Date Received: 08/17/16 09:17

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.265	*	0.0908	0.0939	1.00	0.102	pCi/L	08/26/16 16:00	09/19/16 09:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					08/26/16 16:00	09/19/16 09:36	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.312	U	0.226	0.228	1.00	0.352	pCi/L	08/26/16 22:38	09/13/16 12:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					08/26/16 22:38	09/13/16 12:46	1
Y Carrier	89.0		40 - 110					08/26/16 22:38	09/13/16 12:46	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	0.577		0.244	0.247	5.00	0.352	pCi/L		09/21/16 18:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-2
SDG: AP

Client Sample ID: MGWA-11

Lab Sample ID: 400-125883-3

Date Collected: 08/15/16 13:45

Matrix: Water

Date Received: 08/17/16 09:17

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.285	*	0.0899	0.0934	1.00	0.0917	pCi/L	08/26/16 16:00	09/19/16 09:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.9		40 - 110					08/26/16 16:00	09/19/16 09:37	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.435		0.246	0.249	1.00	0.365	pCi/L	08/26/16 22:38	09/13/16 12:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.9		40 - 110					08/26/16 22:38	09/13/16 12:46	1
Y Carrier	85.2		40 - 110					08/26/16 22:38	09/13/16 12:46	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	0.720		0.261	0.266	5.00	0.365	pCi/L		09/21/16 18:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-2
SDG: AP

Client Sample ID: MGWA-6

Lab Sample ID: 400-125883-4

Date Collected: 08/15/16 15:05

Matrix: Water

Date Received: 08/17/16 09:17

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.376	*	0.0969	0.103	1.00	0.0903	pCi/L	08/26/16 16:00	09/19/16 09:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		40 - 110					08/26/16 16:00	09/19/16 09:40	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0907	U	0.208	0.208	1.00	0.357	pCi/L	08/26/16 22:38	09/13/16 12:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		40 - 110					08/26/16 22:38	09/13/16 12:46	1
Y Carrier	89.0		40 - 110					08/26/16 22:38	09/13/16 12:46	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	0.467		0.229	0.232	5.00	0.357	pCi/L		09/21/16 18:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-2
 SDG: AP

Client Sample ID: MGWC-7

Lab Sample ID: 400-125883-5

Date Collected: 08/15/16 15:05

Matrix: Water

Date Received: 08/17/16 09:17

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.838	*	0.137	0.156	1.00	0.0863	pCi/L	08/26/16 16:00	09/19/16 09:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.6		40 - 110					08/26/16 16:00	09/19/16 09:37	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.463		0.242	0.246	1.00	0.357	pCi/L	08/26/16 22:38	09/13/16 12:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.6		40 - 110					08/26/16 22:38	09/13/16 12:47	1
Y Carrier	88.6		40 - 110					08/26/16 22:38	09/13/16 12:47	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	1.30		0.278	0.291	5.00	0.357	pCi/L		09/21/16 18:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-2
 SDG: AP

Client Sample ID: MGWC-8

Lab Sample ID: 400-125883-6

Date Collected: 08/15/16 15:40

Matrix: Water

Date Received: 08/17/16 09:17

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.973	*	0.159	0.181	1.00	0.129	pCi/L	08/26/16 16:00	09/19/16 09:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.9		40 - 110					08/26/16 16:00	09/19/16 09:37	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.665		0.264	0.271	1.00	0.367	pCi/L	08/26/16 22:38	09/13/16 12:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.9		40 - 110					08/26/16 22:38	09/13/16 12:47	1
Y Carrier	90.8		40 - 110					08/26/16 22:38	09/13/16 12:47	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	1.64		0.308	0.326	5.00	0.367	pCi/L		09/21/16 18:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-2
SDG: AP

Client Sample ID: DUP-1
Date Collected: 08/15/16 00:00
Date Received: 08/17/16 09:17

Lab Sample ID: 400-125883-7
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	0.316	*	0.0891	0.0936	1.00	0.0813	pCi/L	08/26/16 16:00	09/19/16 09:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.9		40 - 110					08/26/16 16:00	09/19/16 09:37	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.215	U	0.222	0.222	1.00	0.361	pCi/L	08/26/16 22:38	09/13/16 12:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.9		40 - 110					08/26/16 22:38	09/13/16 12:47	1
Y Carrier	89.0		40 - 110					08/26/16 22:38	09/13/16 12:47	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	0.531		0.239	0.241	5.00	0.361	pCi/L		09/21/16 18:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-2
 SDG: AP

Client Sample ID: MGWC-1

Lab Sample ID: 400-125883-8

Date Collected: 08/16/16 10:20

Matrix: Water

Date Received: 08/18/16 10:07

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.849	*	0.145	0.164	1.00	0.119	pCi/L	08/26/16 16:00	09/19/16 09:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.9		40 - 110					08/26/16 16:00	09/19/16 09:37	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.268	U	0.255	0.256	1.00	0.413	pCi/L	08/26/16 22:38	09/13/16 12:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.9		40 - 110					08/26/16 22:38	09/13/16 12:47	1
Y Carrier	87.1		40 - 110					08/26/16 22:38	09/13/16 12:47	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	1.12		0.293	0.304	5.00	0.413	pCi/L		09/21/16 18:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-2
 SDG: AP

Client Sample ID: MGWC-3

Lab Sample ID: 400-125883-9

Date Collected: 08/16/16 09:55

Matrix: Water

Date Received: 08/18/16 10:07

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.28	*	0.172	0.207	1.00	0.114	pCi/L	08/26/16 16:00	09/19/16 09:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					08/26/16 16:00	09/19/16 09:37	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.470		0.243	0.247	1.00	0.358	pCi/L	08/26/16 22:38	09/13/16 12:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					08/26/16 22:38	09/13/16 12:47	1
Y Carrier	93.1		40 - 110					08/26/16 22:38	09/13/16 12:47	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	1.75		0.297	0.322	5.00	0.358	pCi/L		09/21/16 18:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-2
 SDG: AP

Client Sample ID: MGWC-2

Lab Sample ID: 400-125883-10

Date Collected: 08/16/16 11:55

Matrix: Water

Date Received: 08/18/16 10:07

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.304	*	0.0874	0.0916	1.00	0.0784	pCi/L	08/26/16 16:00	09/19/16 09:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					08/26/16 16:00	09/19/16 09:37	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.212	U	0.217	0.218	1.00	0.354	pCi/L	08/26/16 22:38	09/13/16 12:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					08/26/16 22:38	09/13/16 12:47	1
Y Carrier	92.3		40 - 110					08/26/16 22:38	09/13/16 12:47	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	0.516		0.234	0.237	5.00	0.354	pCi/L		09/21/16 18:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-2
SDG: AP

Client Sample ID: MGWC-12

Lab Sample ID: 400-125883-11

Date Collected: 08/16/16 12:50

Matrix: Water

Date Received: 08/18/16 10:07

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.143	*	0.0777	0.0788	1.00	0.107	pCi/L	08/26/16 16:00	09/19/16 09:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.6		40 - 110					08/26/16 16:00	09/19/16 09:37	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0894	U	0.217	0.218	1.00	0.374	pCi/L	08/26/16 22:38	09/13/16 12:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.6		40 - 110					08/26/16 22:38	09/13/16 12:47	1
Y Carrier	93.1		40 - 110					08/26/16 22:38	09/13/16 12:47	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	0.232	U	0.231	0.231	5.00	0.374	pCi/L		09/21/16 18:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-2
 SDG: AP

Client Sample ID: FB-1
Date Collected: 08/16/16 13:00
Date Received: 08/18/16 10:07

Lab Sample ID: 400-125883-12
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	0.0388	U *	0.0497	0.0499	1.00	0.0827	pCi/L	08/26/16 16:00	09/19/16 09:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					08/26/16 16:00	09/19/16 09:40	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.00621	U	0.212	0.212	1.00	0.380	pCi/L	08/26/16 22:38	09/13/16 12:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					08/26/16 22:38	09/13/16 12:47	1
Y Carrier	92.7		40 - 110					08/26/16 22:38	09/13/16 12:47	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	0.0450	U	0.218	0.218	5.00	0.380	pCi/L		09/21/16 18:23	1

Client Sample Results

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

TestAmerica Job ID: 400-125883-2
 SDG: AP

Client Sample ID: FERB-1

Lab Sample ID: 400-125883-13

Date Collected: 08/16/16 13:05

Matrix: Water

Date Received: 08/18/16 10:07

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.101	*	0.0562	0.0570	1.00	0.0715	pCi/L	08/26/16 16:00	09/19/16 09:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					08/26/16 16:00	09/19/16 09:40	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0888	U	0.192	0.193	1.00	0.330	pCi/L	08/26/16 22:38	09/13/16 12:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					08/26/16 22:38	09/13/16 12:48	1
Y Carrier	96.1		40 - 110					08/26/16 22:38	09/13/16 12:48	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	0.201	0.201	5.00	0.330	pCi/L		09/21/16 18:23	1

Definitions/Glossary

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

TestAmerica Job ID: 400-125883-2
SDG: AP

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
*	RPD of the LCS and LCSD exceeds the control limits

Glossary

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

Lab Chronicle

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

TestAmerica Job ID: 400-125883-2
SDG: AP

Client Sample ID: MGWA-10

Date Collected: 08/15/16 13:00

Date Received: 08/17/16 09:17

Lab Sample ID: 400-125883-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			266813	08/26/16 16:00	MCJ	TAL SL
Total/NA	Analysis	9315		1	270524	09/19/16 09:36	ALS	TAL SL
Total/NA	Prep	PrecSep_0			266825	08/26/16 22:38	MCJ	TAL SL
Total/NA	Analysis	9320		1	269321	09/13/16 12:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Client Sample ID: MGWA-5

Date Collected: 08/15/16 13:18

Date Received: 08/17/16 09:17

Lab Sample ID: 400-125883-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			266813	08/26/16 16:00	MCJ	TAL SL
Total/NA	Analysis	9315		1	270524	09/19/16 09:36	ALS	TAL SL
Total/NA	Prep	PrecSep_0			266825	08/26/16 22:38	MCJ	TAL SL
Total/NA	Analysis	9320		1	269321	09/13/16 12:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Client Sample ID: MGWA-11

Date Collected: 08/15/16 13:45

Date Received: 08/17/16 09:17

Lab Sample ID: 400-125883-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			266813	08/26/16 16:00	MCJ	TAL SL
Total/NA	Analysis	9315		1	270524	09/19/16 09:37	ALS	TAL SL
Total/NA	Prep	PrecSep_0			266825	08/26/16 22:38	MCJ	TAL SL
Total/NA	Analysis	9320		1	269321	09/13/16 12:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Client Sample ID: MGWA-6

Date Collected: 08/15/16 15:05

Date Received: 08/17/16 09:17

Lab Sample ID: 400-125883-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			266813	08/26/16 16:00	MCJ	TAL SL
Total/NA	Analysis	9315		1	270530	09/19/16 09:40	ALS	TAL SL
Total/NA	Prep	PrecSep_0			266825	08/26/16 22:38	MCJ	TAL SL
Total/NA	Analysis	9320		1	269321	09/13/16 12:46	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-125883-2
SDG: AP

Client Sample ID: MGWC-7

Lab Sample ID: 400-125883-5

Date Collected: 08/15/16 15:05

Matrix: Water

Date Received: 08/17/16 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			266813	08/26/16 16:00	MCJ	TAL SL
Total/NA	Analysis	9315		1	270524	09/19/16 09:37	ALS	TAL SL
Total/NA	Prep	PrecSep_0			266825	08/26/16 22:38	MCJ	TAL SL
Total/NA	Analysis	9320		1	269321	09/13/16 12:47	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Client Sample ID: MGWC-8

Lab Sample ID: 400-125883-6

Date Collected: 08/15/16 15:40

Matrix: Water

Date Received: 08/17/16 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			266813	08/26/16 16:00	MCJ	TAL SL
Total/NA	Analysis	9315		1	270524	09/19/16 09:37	ALS	TAL SL
Total/NA	Prep	PrecSep_0			266825	08/26/16 22:38	MCJ	TAL SL
Total/NA	Analysis	9320		1	269321	09/13/16 12:47	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Client Sample ID: DUP-1

Lab Sample ID: 400-125883-7

Date Collected: 08/15/16 00:00

Matrix: Water

Date Received: 08/17/16 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			266813	08/26/16 16:00	MCJ	TAL SL
Total/NA	Analysis	9315		1	270524	09/19/16 09:37	ALS	TAL SL
Total/NA	Prep	PrecSep_0			266825	08/26/16 22:38	MCJ	TAL SL
Total/NA	Analysis	9320		1	269321	09/13/16 12:47	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Client Sample ID: MGWC-1

Lab Sample ID: 400-125883-8

Date Collected: 08/16/16 10:20

Matrix: Water

Date Received: 08/18/16 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			266813	08/26/16 16:00	MCJ	TAL SL
Total/NA	Analysis	9315		1	270524	09/19/16 09:37	ALS	TAL SL
Total/NA	Prep	PrecSep_0			266825	08/26/16 22:38	MCJ	TAL SL
Total/NA	Analysis	9320		1	269321	09/13/16 12:47	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-125883-2
SDG: AP

Client Sample ID: MGWC-3

Lab Sample ID: 400-125883-9

Date Collected: 08/16/16 09:55

Matrix: Water

Date Received: 08/18/16 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			266813	08/26/16 16:00	MCJ	TAL SL
Total/NA	Analysis	9315		1	270524	09/19/16 09:37	ALS	TAL SL
Total/NA	Prep	PrecSep_0			266825	08/26/16 22:38	MCJ	TAL SL
Total/NA	Analysis	9320		1	269321	09/13/16 12:47	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Client Sample ID: MGWC-2

Lab Sample ID: 400-125883-10

Date Collected: 08/16/16 11:55

Matrix: Water

Date Received: 08/18/16 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			266813	08/26/16 16:00	MCJ	TAL SL
Total/NA	Analysis	9315		1	270524	09/19/16 09:37	ALS	TAL SL
Total/NA	Prep	PrecSep_0			266825	08/26/16 22:38	MCJ	TAL SL
Total/NA	Analysis	9320		1	269321	09/13/16 12:47	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Client Sample ID: MGWC-12

Lab Sample ID: 400-125883-11

Date Collected: 08/16/16 12:50

Matrix: Water

Date Received: 08/18/16 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			266813	08/26/16 16:00	MCJ	TAL SL
Total/NA	Analysis	9315		1	270524	09/19/16 09:37	ALS	TAL SL
Total/NA	Prep	PrecSep_0			266825	08/26/16 22:38	MCJ	TAL SL
Total/NA	Analysis	9320		1	269321	09/13/16 12:47	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Client Sample ID: FB-1

Lab Sample ID: 400-125883-12

Date Collected: 08/16/16 13:00

Matrix: Water

Date Received: 08/18/16 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			266813	08/26/16 16:00	MCJ	TAL SL
Total/NA	Analysis	9315		1	270530	09/19/16 09:40	ALS	TAL SL
Total/NA	Prep	PrecSep_0			266825	08/26/16 22:38	MCJ	TAL SL
Total/NA	Analysis	9320		1	269321	09/13/16 12:47	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-125883-2
SDG: AP

Client Sample ID: FERB-1

Lab Sample ID: 400-125883-13

Date Collected: 08/16/16 13:05

Matrix: Water

Date Received: 08/18/16 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			266813	08/26/16 16:00	MCJ	TAL SL
Total/NA	Analysis	9315		1	270530	09/19/16 09:40	ALS	TAL SL
Total/NA	Prep	PrecSep_0			266825	08/26/16 22:38	MCJ	TAL SL
Total/NA	Analysis	9320		1	269321	09/13/16 12:48	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	271037	09/21/16 18:23	RTM	TAL SL

Laboratory References:

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

QC Association Summary

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

TestAmerica Job ID: 400-125883-2
 SDG: AP

Rad

Prep Batch: 266813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125883-1	MGWA-10	Total/NA	Water	PrecSep-21	
400-125883-2	MGWA-5	Total/NA	Water	PrecSep-21	
400-125883-3	MGWA-11	Total/NA	Water	PrecSep-21	
400-125883-4	MGWA-6	Total/NA	Water	PrecSep-21	
400-125883-5	MGWC-7	Total/NA	Water	PrecSep-21	
400-125883-6	MGWC-8	Total/NA	Water	PrecSep-21	
400-125883-7	DUP-1	Total/NA	Water	PrecSep-21	
400-125883-8	MGWC-1	Total/NA	Water	PrecSep-21	
400-125883-9	MGWC-3	Total/NA	Water	PrecSep-21	
400-125883-10	MGWC-2	Total/NA	Water	PrecSep-21	
400-125883-11	MGWC-12	Total/NA	Water	PrecSep-21	
400-125883-12	FB-1	Total/NA	Water	PrecSep-21	
400-125883-13	FERB-1	Total/NA	Water	PrecSep-21	
MB 160-266813/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-266813/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-266813/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 266825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125883-1	MGWA-10	Total/NA	Water	PrecSep_0	
400-125883-2	MGWA-5	Total/NA	Water	PrecSep_0	
400-125883-3	MGWA-11	Total/NA	Water	PrecSep_0	
400-125883-4	MGWA-6	Total/NA	Water	PrecSep_0	
400-125883-5	MGWC-7	Total/NA	Water	PrecSep_0	
400-125883-6	MGWC-8	Total/NA	Water	PrecSep_0	
400-125883-7	DUP-1	Total/NA	Water	PrecSep_0	
400-125883-8	MGWC-1	Total/NA	Water	PrecSep_0	
400-125883-9	MGWC-3	Total/NA	Water	PrecSep_0	
400-125883-10	MGWC-2	Total/NA	Water	PrecSep_0	
400-125883-11	MGWC-12	Total/NA	Water	PrecSep_0	
400-125883-12	FB-1	Total/NA	Water	PrecSep_0	
400-125883-13	FERB-1	Total/NA	Water	PrecSep_0	
MB 160-266825/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-266825/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-266825/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-125883-2
SDG: AP

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-266813/1-A
Matrix: Water
Analysis Batch: 270524

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 266813

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.04923	U	0.0568	0.0570	1.00	0.0927	pCi/L	08/26/16 16:00	09/19/16 09:36	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.3		40 - 110					08/26/16 16:00	09/19/16 09:36	1

Lab Sample ID: LCS 160-266813/2-A
Matrix: Water
Analysis Batch: 270529

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 266813

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.2	8.931		0.908	1.00	0.0817	pCi/L	80	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	82.6		40 - 110						

Lab Sample ID: LCSD 160-266813/3-A
Matrix: Water
Analysis Batch: 270529

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 266813

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	11.2	12.02	*	1.19	1.00	0.0834	pCi/L	108	68 - 137	1.48	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits								
Ba Carrier	84.3		40 - 110								

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-266825/1-A
Matrix: Water
Analysis Batch: 269321

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 266825

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1099	U	0.246	0.247	1.00	0.423	pCi/L	08/26/16 22:38	09/13/16 12:46	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.3		40 - 110					08/26/16 22:38	09/13/16 12:46	1
Y Carrier	90.5		40 - 110					08/26/16 22:38	09/13/16 12:46	1

QC Sample Results

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

TestAmerica Job ID: 400-125883-2
 SDG: AP

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

Lab Sample ID: LCS 160-266825/2-A
Matrix: Water
Analysis Batch: 269321

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 266825

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.6	13.87		1.51	1.00	0.353	pCi/L	95	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	82.6		40 - 110
Y Carrier	95.0		40 - 110

Lab Sample ID: LCSD 160-266825/3-A
Matrix: Water
Analysis Batch: 269321

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 266825

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	14.6	16.17		1.72	1.00	0.341	pCi/L	111	56 - 140	0.71	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	84.3		40 - 110
Y Carrier	91.6		40 - 110

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

Lab Sample ID: 400-126077-A-2 DU
Matrix: Water
Analysis Batch: 271037


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	0.231	U	0.7399		0.382	5.00	0.570	pCi/L	0.73	

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

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information			Sampler:			Lab Piv:			Carrier Tracking No(s):			COC No:		
Client Contact: Joju Abraham			ERM			Whitnire, Cheyenne R			400-57303-24790.1			Page: 1081		
Company: Southern Company			Phone:			E-Mail: cheyenne.whitnire@testamericainc.com			Job #: 125883					
Address: 241 Ralph McGill Blvd SE B10185			Due Date Requested:			Analysis Requested			Preservation Codes:					
City: Atlanta			TAT Requested (days):			 400-125883 COC			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:		
State, Zip: GA, 30308			PO #:											
Phone: 404-506-7239			W/O #:			Field Filtered Sample (Yes or No)			Total Number of Containers					
Email: JAbraham@southernco.com			Project #:			Matrix			TDS - SM 2640C : Cl,F,S04 - EPA 300					
Project Name: Plant McIntosh			SSOW#:			Sample Type			Metals Appendix III & IV - EPA 6020 & EPA 7470					
Site: AP			Sample Date			Sample Time			Radium 226 & 228 - SW-846 9315 & 9320					
Sample Identification			Preservation Code			Matrix			Performance (MSD) (Yes or No)					
M GWC - 1			6			Water			Field ID					
M GWC - 3			6			Water								
M GWC - 2			6			Water								
M GWC - 12			6			Water								
FB - 1			6			Water								
FERB - 1			6			Water								
						Water								
						Water								
						Water								
						Water								
						Water								
Possible Hazard Identification <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												Sample Disposal (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 <input type="checkbox"/> Archive For _____ Months		
Deliverable Requested: I, II, III, IV, Other (specify)												Special Instructions/QC Requirements:		
Empty Kit Relinquished by:						Method of Shipment:								
Relinquished by: <i>Joju Abraham</i>						Date: 8/17/16 1228								
Relinquished by: <i>Joju Abraham</i>						Company: ERM								
Relinquished by: <i>Joju Abraham</i>						Date/Time: 8/17/16 1700								
Relinquished by: <i>Joju Abraham</i>						Company: ERM								
Custody Seal No.: <i>IR6</i>						Cooler Temperature(s) °C and Other Remarks: <i>0.0°C IR6</i>								

681-Atlanta



Chain of Custody Record

Client Information Client Contact: Jofu Abraham 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: CCR - Plant McIntosh Site: AP		Lab PIV: Whitmore, Cheyenne R. E-Mail: cheyenne.whitmore@testamerica.com PO #: _____ WO #: _____ Project #: _____ SSON#: _____		Carrier Tracking No(s): 400-57303-24790.1 Page: 1 of 1 Job #: _____	
Due Date Requested: TAT Requested (days): PO #: WO #: Project #: SSON#:		Analysis Requested Metals Appendix III & IV - EPA 6020 & EPA 7470 Radium 226 & 228 - SW-846 9315 & 9320 Total Number of Elements: _____			
Sample Identification Sample ID: _____ Sample Type (C=Comp, G=Grab): _____ Matrix (F=Water, S=Soils, C=Sludges, BT=Slimes, A=Air): _____ Sample Date: _____ Sample Time: _____ Preservation Code: _____		Field Filled 9/16/16 (X=NO) U D B Total Number of Elements: _____			
Sample ID: M6WA-10 M6WA-5 M6WA-11 M6WA-6 M6WC-7 M6WC-8 DUP-1	Sample Date: 8/15/16 8/15/16 8/15/16 8/15/16 8/15/16 8/15/16	Sample Time: 1300 1318 1345 1505 1505 1540 ---	Matrix: Water Water Water Water Water Water Water	Preservation Code: 1 1 1 1 1 1 1	Special Instructions/Note: _____ _____ _____ _____ _____ _____ _____
Possible Hazard Identification <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		Sample Disposal (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 <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements: 541588CF			
Empty Kit Relinquished by: _____ Relinquished by: _____ Relinquished by: _____ Relinquished by: _____		Date: _____ Date/Time: 8/15/16 1750 Date/Time: 8/15/16 1730 Date/Time: _____ Date/Time: _____			
Custody Seals Intact: _____ A Yes A No		Cooler Temperature(s) °C and Other Remarks: _____			



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-125883-2

SDG Number: AP

Login Number: 125883

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR-5, 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 McIntosh

TestAmerica Job ID: 400-125883-2
 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	09-01-16 *
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-16
Iowa	State Program	7	367	07-31-16 *
Kansas	NELAP	7	E-10253	10-31-16
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-16
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-16 *
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

Laboratory: TestAmerica St. Louis

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-17
California	State Program	9	2886	03-31-18
Connecticut	State Program	1	PH-0241	03-31-17
Florida	NELAP	4	E87689	06-30-17
Illinois	NELAP	5	003757	11-30-16 *
Iowa	State Program	7	373	12-01-16 *
Kansas	NELAP	7	E-10236	10-31-16 *
Kentucky (DW)	State Program	4	90125	12-31-16
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17
Louisiana (DW)	NELAP	6	LA160008	12-31-16
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17
Nevada	State Program	9	MO000542016-1	07-31-17
New Jersey	NELAP	2	MO002	06-30-17
New York	NELAP	2	11616	03-31-17
North Dakota	State Program	8	R207	06-30-17
NRC	NRC		24-24817-01	12-31-22

* Certification renewal pending - certification considered valid.

Certification Summary

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

TestAmerica Job ID: 400-125883-2
SDG: AP

Laboratory: TestAmerica St. Louis (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-28-17 *
South Carolina	State Program	4	85002001	06-30-16 *
Texas	NELAP	6	T104704193-15-9	07-31-17
USDA	Federal		P330-07-00122	01-09-17
Utah	NELAP	8	MO000542016-8	07-31-17
Virginia	NELAP	3	460230	06-14-17
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-16 *

* Certification renewal pending - certification considered valid.

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: 400-127916-1

TestAmerica Sample Delivery Group: AP

Client Project/Site: CCR - Plant McIntosh

For:

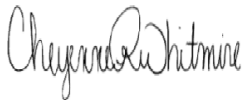
Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

10/26/2016 4:28:35 PM

Cheyenne Whitmire, Project Manager II

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cheyenne.whitmire@testamericainc.com

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

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

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

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Case Narrative

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

TestAmerica Job ID: 400-127916-1
SDG: AP

Job ID: 400-127916-1

Laboratory: TestAmerica Pensacola

Narrative

**Job Narrative
400-127916-1**

HPLC/IC

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MGWC-7 (400-127916-5), MGWC-1 (400-127916-6), MGWC-8 (400-127916-7) and DUP-1 (400-127916-10). Elevated reporting limits (RLs) are provided.

Metals

Method(s) 6020: The initial calibration verification (ICV) result for batch 328072 was above the upper control limit for Selenium. Sample results were non-detects above the reporting limit, and have been reported as qualified data.

Method(s) 7470A: The matrix spike (MS) recoveries for prep batch 325480 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 McIntosh

TestAmerica Job ID: 400-127916-1
SDG: AP

Client Sample ID: MGWA-10

Lab Sample ID: 400-127916-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.0		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
Arsenic	0.00095	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.032		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.023	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	7.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0027		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0075		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.00030	J ^	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	29		2.5	1.7	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWA-11

Lab Sample ID: 400-127916-2

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
Fluoride	0.097	J	0.20	0.082	mg/L	1		300.0	Total/NA
Arsenic	0.0026		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.12		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	38		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.019		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0018	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	100		2.5	1.7	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWA-5

Lab Sample ID: 400-127916-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.1		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	7.8		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	0.038		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	31		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0075		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0012	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	91		2.5	1.7	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 McIntosh

TestAmerica Job ID: 400-127916-1
 SDG: AP

Client Sample ID: MGWA-6

Lab Sample ID: 400-127916-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.084	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	21		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.033		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.060		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.17		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	110		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00043	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	170		2.5	1.7	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-7

Lab Sample ID: 400-127916-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		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	170		10	7.0	mg/L	10		300.0	Total/NA
Arsenic	0.00084	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.014		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.3		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	58		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0095		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.12		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	180		2.5	1.7	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-1

Lab Sample ID: 400-127916-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14		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	110		5.0	3.5	mg/L	5		300.0	Total/NA
Arsenic	0.0036		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.10		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.70		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	92		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	0.012		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0018	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 McIntosh

TestAmerica Job ID: 400-127916-1
 SDG: AP

Client Sample ID: MGWC-1 (Continued)

Lab Sample ID: 400-127916-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	190		2.5	1.7	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-8

Lab Sample ID: 400-127916-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.2		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	130		5.0	3.5	mg/L	5		300.0	Total/NA
Barium	0.034		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00049	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Boron	0.80		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	32		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0043		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.026		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Selenium	0.00038	J ^	0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00014	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	130		2.5	1.7	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-1

Lab Sample ID: 400-127916-8

No Detections.

Client Sample ID: FERB-1

Lab Sample ID: 400-127916-9

No Detections.

Client Sample ID: DUP-1

Lab Sample ID: 400-127916-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		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	120		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	0.088		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.72		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	86		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00048	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.012		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0015	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 McIntosh

TestAmerica Job ID: 400-127916-1
SDG: AP

Client Sample ID: DUP-1 (Continued)

Lab Sample ID: 400-127916-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Thallium	0.000085	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	380		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 McIntosh

TestAmerica Job ID: 400-127916-1
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 McIntosh

TestAmerica Job ID: 400-127916-1
SDG: AP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-127916-1	MGWA-10	Water	09/28/16 11:50	09/28/16 18:00
400-127916-2	MGWA-11	Water	09/28/16 12:10	09/28/16 18:00
400-127916-3	MGWA-5	Water	09/28/16 13:32	09/28/16 18:00
400-127916-4	MGWA-6	Water	09/28/16 14:08	09/28/16 18:00
400-127916-5	MGWC-7	Water	09/28/16 15:38	09/28/16 18:00
400-127916-6	MGWC-1	Water	09/28/16 15:27	09/28/16 18:00
400-127916-7	MGWC-8	Water	09/28/16 15:45	09/28/16 18:00
400-127916-8	FB-1	Water	09/28/16 16:00	09/28/16 18:00
400-127916-9	FERB-1	Water	09/28/16 16:15	09/28/16 18:00
400-127916-10	DUP-1	Water	09/28/16 00:00	09/28/16 18:00



Client Sample Results

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

TestAmerica Job ID: 400-127916-1
 SDG: AP

Client Sample ID: MGWA-10

Lab Sample ID: 400-127916-1

Date Collected: 09/28/16 11:50

Matrix: Water

Date Received: 09/28/16 18:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.0		1.0	0.89	mg/L			10/10/16 18:58	1
Fluoride	<0.082		0.20	0.082	mg/L			10/10/16 18:58	1
Sulfate	1.9		1.0	0.70	mg/L			10/10/16 18:58	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		10/10/16 13:18	10/24/16 16:08	5
Arsenic	0.00095	J	0.0013	0.00046	mg/L		10/10/16 13:18	10/24/16 16:08	5
Barium	0.032		0.0025	0.00049	mg/L		10/10/16 13:18	10/24/16 16:08	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:18	10/24/16 16:08	5
Boron	0.023	J	0.050	0.021	mg/L		10/10/16 13:18	10/24/16 16:08	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:18	10/24/16 16:08	5
Calcium	7.2		0.25	0.13	mg/L		10/10/16 13:18	10/24/16 16:08	5
Chromium	0.0027		0.0025	0.0011	mg/L		10/10/16 13:18	10/24/16 16:08	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/10/16 13:18	10/24/16 16:08	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/10/16 13:18	10/24/16 16:08	5
Lithium	0.0075		0.0050	0.0032	mg/L		10/10/16 13:18	10/24/16 16:08	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/10/16 13:18	10/24/16 16:08	5
Selenium	0.00030	J ^	0.0013	0.00024	mg/L		10/10/16 13:18	10/24/16 16:08	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/10/16 13:18	10/24/16 16:08	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		10/05/16 10:23	10/06/16 15:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	29		2.5	1.7	mg/L			10/01/16 17:33	1

Client Sample Results

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

TestAmerica Job ID: 400-127916-1
SDG: AP

Client Sample ID: MGWA-11

Lab Sample ID: 400-127916-2

Date Collected: 09/28/16 12:10

Matrix: Water

Date Received: 09/28/16 18:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.9		1.0	0.89	mg/L			10/10/16 19:21	1
Fluoride	0.097	J	0.20	0.082	mg/L			10/10/16 19:21	1
Sulfate	<0.70		1.0	0.70	mg/L			10/10/16 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		10/10/16 13:18	10/24/16 16:26	5
Arsenic	0.0026		0.0013	0.00046	mg/L		10/10/16 13:18	10/24/16 16:26	5
Barium	0.12		0.0025	0.00049	mg/L		10/10/16 13:18	10/24/16 16:26	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:18	10/24/16 16:26	5
Boron	0.021	J	0.050	0.021	mg/L		10/10/16 13:18	10/24/16 16:26	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:18	10/24/16 16:26	5
Calcium	38		0.25	0.13	mg/L		10/10/16 13:18	10/24/16 16:26	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/10/16 13:18	10/24/16 16:26	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/10/16 13:18	10/24/16 16:26	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/10/16 13:18	10/24/16 16:26	5
Lithium	0.019		0.0050	0.0032	mg/L		10/10/16 13:18	10/24/16 16:26	5
Molybdenum	0.0018	J	0.015	0.00085	mg/L		10/10/16 13:18	10/24/16 16:26	5
Selenium	<0.00024	^	0.0013	0.00024	mg/L		10/10/16 13:18	10/24/16 16:26	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/10/16 13:18	10/24/16 16:26	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/05/16 10:23	10/06/16 15:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	100		2.5	1.7	mg/L			10/01/16 17:33	1

Client Sample Results

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

TestAmerica Job ID: 400-127916-1
SDG: AP

Client Sample ID: MGWA-5

Lab Sample ID: 400-127916-3

Date Collected: 09/28/16 13:32

Matrix: Water

Date Received: 09/28/16 18:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.1		1.0	0.89	mg/L			10/10/16 19:44	1
Fluoride	0.11	J	0.20	0.082	mg/L			10/10/16 19:44	1
Sulfate	7.8		1.0	0.70	mg/L			10/10/16 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		10/10/16 13:18	10/24/16 16:31	5
Arsenic	0.00062	J	0.0013	0.00046	mg/L		10/10/16 13:18	10/24/16 16:31	5
Barium	0.038		0.0025	0.00049	mg/L		10/10/16 13:18	10/24/16 16:31	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:18	10/24/16 16:31	5
Boron	<0.021		0.050	0.021	mg/L		10/10/16 13:18	10/24/16 16:31	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:18	10/24/16 16:31	5
Calcium	31		0.25	0.13	mg/L		10/10/16 13:18	10/24/16 16:31	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/10/16 13:18	10/24/16 16:31	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/10/16 13:18	10/24/16 16:31	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/10/16 13:18	10/24/16 16:31	5
Lithium	0.0075		0.0050	0.0032	mg/L		10/10/16 13:18	10/24/16 16:31	5
Molybdenum	0.0012	J	0.015	0.00085	mg/L		10/10/16 13:18	10/24/16 16:31	5
Selenium	<0.00024	^	0.0013	0.00024	mg/L		10/10/16 13:18	10/24/16 16:31	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/10/16 13:18	10/24/16 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		10/05/16 10:23	10/06/16 15:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	91		2.5	1.7	mg/L			10/01/16 17:33	1

Client Sample Results

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

TestAmerica Job ID: 400-127916-1
SDG: AP

Client Sample ID: MGWA-6

Date Collected: 09/28/16 14:08

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-4

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10		1.0	0.89	mg/L			10/10/16 20:06	1
Fluoride	0.084	J	0.20	0.082	mg/L			10/10/16 20:06	1
Sulfate	21		1.0	0.70	mg/L			10/10/16 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		10/10/16 13:18	10/24/16 16:35	5
Arsenic	0.033		0.0013	0.00046	mg/L		10/10/16 13:18	10/24/16 16:35	5
Barium	0.060		0.0025	0.00049	mg/L		10/10/16 13:18	10/24/16 16:35	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:18	10/24/16 16:35	5
Boron	0.17		0.050	0.021	mg/L		10/10/16 13:18	10/24/16 16:35	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:18	10/24/16 16:35	5
Calcium	110		0.25	0.13	mg/L		10/10/16 13:18	10/24/16 16:35	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/10/16 13:18	10/24/16 16:35	5
Cobalt	0.00043	J	0.0025	0.00040	mg/L		10/10/16 13:18	10/24/16 16:35	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/10/16 13:18	10/24/16 16:35	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/10/16 13:18	10/24/16 16:35	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/10/16 13:18	10/24/16 16:35	5
Selenium	<0.00024	^	0.0013	0.00024	mg/L		10/10/16 13:18	10/24/16 16:35	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/10/16 13:18	10/24/16 16:35	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/05/16 10:23	10/06/16 15:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	170		2.5	1.7	mg/L			10/01/16 17:33	1

Client Sample Results

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

TestAmerica Job ID: 400-127916-1
SDG: AP

Client Sample ID: MGWC-7

Lab Sample ID: 400-127916-5

Date Collected: 09/28/16 15:38

Matrix: Water

Date Received: 09/28/16 18:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		1.0	0.89	mg/L			10/10/16 20:29	1
Fluoride	0.40		0.20	0.082	mg/L			10/10/16 20:29	1
Sulfate	170		10	7.0	mg/L			10/11/16 23:39	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		10/10/16 13:18	10/24/16 16:40	5
Arsenic	0.00084	J	0.0013	0.00046	mg/L		10/10/16 13:18	10/24/16 16:40	5
Barium	0.014		0.0025	0.00049	mg/L		10/10/16 13:18	10/24/16 16:40	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:18	10/24/16 16:40	5
Boron	1.3		0.050	0.021	mg/L		10/10/16 13:18	10/24/16 16:40	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:18	10/24/16 16:40	5
Calcium	58		0.25	0.13	mg/L		10/10/16 13:18	10/24/16 16:40	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/10/16 13:18	10/24/16 16:40	5
Cobalt	0.0095		0.0025	0.00040	mg/L		10/10/16 13:18	10/24/16 16:40	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/10/16 13:18	10/24/16 16:40	5
Lithium	0.12		0.0050	0.0032	mg/L		10/10/16 13:18	10/24/16 16:40	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/10/16 13:18	10/24/16 16:40	5
Selenium	<0.00024	^	0.0013	0.00024	mg/L		10/10/16 13:18	10/24/16 16:40	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/10/16 13:18	10/24/16 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		10/05/16 10:23	10/06/16 15:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	180		2.5	1.7	mg/L			10/01/16 17:33	1

Client Sample Results

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

TestAmerica Job ID: 400-127916-1
 SDG: AP

Client Sample ID: MGWC-1
Date Collected: 09/28/16 15:27
Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-6
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14		1.0	0.89	mg/L			10/10/16 21:15	1
Fluoride	0.26		0.20	0.082	mg/L			10/10/16 21:15	1
Sulfate	110		5.0	3.5	mg/L			10/12/16 00:02	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		10/10/16 13:18	10/24/16 16:44	5
Arsenic	0.0036		0.0013	0.00046	mg/L		10/10/16 13:18	10/24/16 16:44	5
Barium	0.10		0.0025	0.00049	mg/L		10/10/16 13:18	10/24/16 16:44	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:18	10/24/16 16:44	5
Boron	0.70		0.050	0.021	mg/L		10/10/16 13:18	10/24/16 16:44	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:18	10/24/16 16:44	5
Calcium	92		0.25	0.13	mg/L		10/10/16 13:18	10/24/16 16:44	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/10/16 13:18	10/24/16 16:44	5
Cobalt	0.00058	J	0.0025	0.00040	mg/L		10/10/16 13:18	10/24/16 16:44	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/10/16 13:18	10/24/16 16:44	5
Lithium	0.012		0.0050	0.0032	mg/L		10/10/16 13:18	10/24/16 16:44	5
Molybdenum	0.0018	J	0.015	0.00085	mg/L		10/10/16 13:18	10/24/16 16:44	5
Selenium	<0.00024	^	0.0013	0.00024	mg/L		10/10/16 13:18	10/24/16 16:44	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/10/16 13:18	10/24/16 16:44	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		10/05/16 10:23	10/06/16 15:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	190		2.5	1.7	mg/L			10/01/16 17:33	1

Client Sample Results

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

TestAmerica Job ID: 400-127916-1
SDG: AP

Client Sample ID: MGWC-8

Lab Sample ID: 400-127916-7

Date Collected: 09/28/16 15:45

Matrix: Water

Date Received: 09/28/16 18:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.2		1.0	0.89	mg/L			10/10/16 21:38	1
Fluoride	0.10	J	0.20	0.082	mg/L			10/10/16 21:38	1
Sulfate	130		5.0	3.5	mg/L			10/12/16 00:25	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		10/10/16 13:18	10/24/16 16:49	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/10/16 13:18	10/24/16 16:49	5
Barium	0.034		0.0025	0.00049	mg/L		10/10/16 13:18	10/24/16 16:49	5
Beryllium	0.00049	J	0.0025	0.00034	mg/L		10/10/16 13:18	10/24/16 16:49	5
Boron	0.80		0.050	0.021	mg/L		10/10/16 13:18	10/24/16 16:49	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:18	10/24/16 16:49	5
Calcium	32		0.25	0.13	mg/L		10/10/16 13:18	10/24/16 16:49	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/10/16 13:18	10/24/16 16:49	5
Cobalt	0.0043		0.0025	0.00040	mg/L		10/10/16 13:18	10/24/16 16:49	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/10/16 13:18	10/24/16 16:49	5
Lithium	0.026		0.0050	0.0032	mg/L		10/10/16 13:18	10/24/16 16:49	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/10/16 13:18	10/24/16 16:49	5
Selenium	0.00038	J ^	0.0013	0.00024	mg/L		10/10/16 13:18	10/24/16 16:49	5
Thallium	0.00014	J	0.00050	0.000085	mg/L		10/10/16 13:18	10/24/16 16:49	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		10/05/16 12:56	10/10/16 10:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	130		2.5	1.7	mg/L			10/01/16 17:33	1

Client Sample Results

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

TestAmerica Job ID: 400-127916-1
SDG: AP

Client Sample ID: FB-1
Date Collected: 09/28/16 16:00
Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-8
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			10/10/16 22:01	1
Fluoride	<0.082		0.20	0.082	mg/L			10/10/16 22:01	1
Sulfate	<0.70		1.0	0.70	mg/L			10/10/16 22:01	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		10/10/16 13:18	10/24/16 16:53	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/10/16 13:18	10/24/16 16:53	5
Barium	<0.00049		0.0025	0.00049	mg/L		10/10/16 13:18	10/24/16 16:53	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:18	10/24/16 16:53	5
Boron	<0.021		0.050	0.021	mg/L		10/10/16 13:18	10/24/16 16:53	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:18	10/24/16 16:53	5
Calcium	<0.13		0.25	0.13	mg/L		10/10/16 13:18	10/24/16 16:53	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/10/16 13:18	10/24/16 16:53	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/10/16 13:18	10/24/16 16:53	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/10/16 13:18	10/24/16 16:53	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/10/16 13:18	10/24/16 16:53	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/10/16 13:18	10/24/16 16:53	5
Selenium	<0.00024 ^		0.0013	0.00024	mg/L		10/10/16 13:18	10/24/16 16:53	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/10/16 13:18	10/24/16 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		10/05/16 12:56	10/10/16 10:17	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			10/04/16 11:35	1

Client Sample Results

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

TestAmerica Job ID: 400-127916-1
SDG: AP

Client Sample ID: FERB-1

Date Collected: 09/28/16 16:15

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-9

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			10/10/16 23:17	1
Fluoride	<0.082		0.20	0.082	mg/L			10/10/16 23:17	1
Sulfate	<0.70		1.0	0.70	mg/L			10/10/16 23:17	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		10/10/16 13:18	10/24/16 16:58	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/10/16 13:18	10/24/16 16:58	5
Barium	<0.00049		0.0025	0.00049	mg/L		10/10/16 13:18	10/24/16 16:58	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:18	10/24/16 16:58	5
Boron	<0.021		0.050	0.021	mg/L		10/10/16 13:18	10/24/16 16:58	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:18	10/24/16 16:58	5
Calcium	<0.13		0.25	0.13	mg/L		10/10/16 13:18	10/24/16 16:58	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/10/16 13:18	10/24/16 16:58	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/10/16 13:18	10/24/16 16:58	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/10/16 13:18	10/24/16 16:58	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/10/16 13:18	10/24/16 16:58	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/10/16 13:18	10/24/16 16:58	5
Selenium	<0.00024 ^		0.0013	0.00024	mg/L		10/10/16 13:18	10/24/16 16:58	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/10/16 13:18	10/24/16 16:58	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		10/05/16 12:56	10/10/16 10:18	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			10/04/16 11:35	1

Client Sample Results

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

TestAmerica Job ID: 400-127916-1
SDG: AP

Client Sample ID: DUP-1

Date Collected: 09/28/16 00:00

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-10

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		1.0	0.89	mg/L			10/11/16 13:01	1
Fluoride	0.25		0.20	0.082	mg/L			10/11/16 13:01	1
Sulfate	120		5.0	3.5	mg/L			10/12/16 12:35	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		10/10/16 13:00	10/19/16 00:24	5
Arsenic	0.0031		0.0013	0.00046	mg/L		10/10/16 13:00	10/19/16 00:24	5
Barium	0.088		0.0025	0.00049	mg/L		10/10/16 13:00	10/19/16 00:24	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:00	10/19/16 00:24	5
Boron	0.72		0.050	0.021	mg/L		10/10/16 13:00	10/24/16 16:04	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:00	10/24/16 16:04	5
Calcium	86		0.25	0.13	mg/L		10/10/16 13:00	10/19/16 00:24	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/10/16 13:00	10/19/16 00:24	5
Cobalt	0.00048	J	0.0025	0.00040	mg/L		10/10/16 13:00	10/19/16 00:24	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/10/16 13:00	10/19/16 00:24	5
Lithium	0.012		0.0050	0.0032	mg/L		10/10/16 13:00	10/19/16 00:24	5
Molybdenum	0.0015	J	0.015	0.00085	mg/L		10/10/16 13:00	10/19/16 00:24	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/10/16 13:00	10/19/16 00:24	5
Thallium	0.000085	J	0.00050	0.000085	mg/L		10/10/16 13:00	10/24/16 16:04	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		10/05/16 12:56	10/10/16 10:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	380		5.0	3.4	mg/L			10/04/16 11:35	1

Definitions/Glossary

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

TestAmerica Job ID: 400-127916-1
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.
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
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
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 McIntosh

TestAmerica Job ID: 400-127916-1
SDG: AP

Client Sample ID: MGWA-10

Date Collected: 09/28/16 11:50

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326210	10/10/16 18:58	TAJ	TAL PEN
Total Recoverable	Prep	3005A			326118	10/10/16 13:18	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	328072	10/24/16 16:08	AJR	TAL PEN
Total/NA	Prep	7470A			325442	10/05/16 10:23	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325711	10/06/16 15:12	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324961	10/01/16 17:33	JLB	TAL PEN

Client Sample ID: MGWA-11

Date Collected: 09/28/16 12:10

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326210	10/10/16 19:21	TAJ	TAL PEN
Total Recoverable	Prep	3005A			326118	10/10/16 13:18	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	328072	10/24/16 16:26	AJR	TAL PEN
Total/NA	Prep	7470A			325442	10/05/16 10:23	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325711	10/06/16 15:13	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324961	10/01/16 17:33	JLB	TAL PEN

Client Sample ID: MGWA-5

Date Collected: 09/28/16 13:32

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326210	10/10/16 19:44	TAJ	TAL PEN
Total Recoverable	Prep	3005A			326118	10/10/16 13:18	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	328072	10/24/16 16:31	AJR	TAL PEN
Total/NA	Prep	7470A			325442	10/05/16 10:23	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325711	10/06/16 15:14	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324961	10/01/16 17:33	JLB	TAL PEN

Client Sample ID: MGWA-6

Date Collected: 09/28/16 14:08

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326210	10/10/16 20:06	TAJ	TAL PEN
Total Recoverable	Prep	3005A			326118	10/10/16 13:18	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	328072	10/24/16 16:35	AJR	TAL PEN
Total/NA	Prep	7470A			325442	10/05/16 10:23	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325711	10/06/16 15:15	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324961	10/01/16 17:33	JLB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-127916-1
SDG: AP

Client Sample ID: MGWC-7

Date Collected: 09/28/16 15:38

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326210	10/10/16 20:29	TAJ	TAL PEN
Total/NA	Analysis	300.0		10	326381	10/11/16 23:39	TAJ	TAL PEN
Total Recoverable	Prep	3005A			326118	10/10/16 13:18	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	328072	10/24/16 16:40	AJR	TAL PEN
Total/NA	Prep	7470A			325442	10/05/16 10:23	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325711	10/06/16 15:17	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324961	10/01/16 17:33	JLB	TAL PEN

Client Sample ID: MGWC-1

Date Collected: 09/28/16 15:27

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326210	10/10/16 21:15	TAJ	TAL PEN
Total/NA	Analysis	300.0		5	326381	10/12/16 00:02	TAJ	TAL PEN
Total Recoverable	Prep	3005A			326118	10/10/16 13:18	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	328072	10/24/16 16:44	AJR	TAL PEN
Total/NA	Prep	7470A			325442	10/05/16 10:23	JAP	TAL PEN
Total/NA	Analysis	7470A		1	325711	10/06/16 15:32	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324961	10/01/16 17:33	JLB	TAL PEN

Client Sample ID: MGWC-8

Date Collected: 09/28/16 15:45

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326210	10/10/16 21:38	TAJ	TAL PEN
Total/NA	Analysis	300.0		5	326381	10/12/16 00:25	TAJ	TAL PEN
Total Recoverable	Prep	3005A			326118	10/10/16 13:18	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	328072	10/24/16 16:49	AJR	TAL PEN
Total/NA	Prep	7470A			325480	10/05/16 12:56	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 10:15	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	324961	10/01/16 17:33	JLB	TAL PEN

Client Sample ID: FB-1

Date Collected: 09/28/16 16:00

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326210	10/10/16 22:01	TAJ	TAL PEN
Total Recoverable	Prep	3005A			326118	10/10/16 13:18	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	328072	10/24/16 16:53	AJR	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-127916-1
SDG: AP

Client Sample ID: FB-1

Lab Sample ID: 400-127916-8

Date Collected: 09/28/16 16:00

Matrix: Water

Date Received: 09/28/16 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			325480	10/05/16 12:56	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 10:17	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	325214	10/04/16 11:35	JLB	TAL PEN

Client Sample ID: FERB-1

Lab Sample ID: 400-127916-9

Date Collected: 09/28/16 16:15

Matrix: Water

Date Received: 09/28/16 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326210	10/10/16 23:17	TAJ	TAL PEN
Total Recoverable	Prep	3005A			326118	10/10/16 13:18	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	328072	10/24/16 16:58	AJR	TAL PEN
Total/NA	Prep	7470A			325480	10/05/16 12:56	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 10:18	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	325214	10/04/16 11:35	JLB	TAL PEN

Client Sample ID: DUP-1

Lab Sample ID: 400-127916-10

Date Collected: 09/28/16 00:00

Matrix: Water

Date Received: 09/28/16 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	326212	10/11/16 13:01	TAJ	TAL PEN
Total/NA	Analysis	300.0		5	326383	10/12/16 12:35	TAJ	TAL PEN
Total Recoverable	Prep	3005A			326107	10/10/16 13:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	327233	10/19/16 00:24	RJB	TAL PEN
Total Recoverable	Prep	3005A			326107	10/10/16 13:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	328072	10/24/16 16:04	AJR	TAL PEN
Total/NA	Prep	7470A			325480	10/05/16 12:56	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326133	10/10/16 10:19	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	325214	10/04/16 11:35	JLB	TAL PEN

Laboratory References:

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

QC Association Summary

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

TestAmerica Job ID: 400-127916-1
SDG: AP

HPLC/IC

Analysis Batch: 326210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127916-1	MGWA-10	Total/NA	Water	300.0	
400-127916-2	MGWA-11	Total/NA	Water	300.0	
400-127916-3	MGWA-5	Total/NA	Water	300.0	
400-127916-4	MGWA-6	Total/NA	Water	300.0	
400-127916-5	MGWC-7	Total/NA	Water	300.0	
400-127916-6	MGWC-1	Total/NA	Water	300.0	
400-127916-7	MGWC-8	Total/NA	Water	300.0	
400-127916-8	FB-1	Total/NA	Water	300.0	
400-127916-9	FERB-1	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 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
400-127916-5 MS	MGWC-7	Total/NA	Water	300.0	

Analysis Batch: 326212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127916-10	DUP-1	Total/NA	Water	300.0	
MB 400-326212/34	Method Blank	Total/NA	Water	300.0	
LCS 400-326212/35	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-326212/36	Lab Control Sample Dup	Total/NA	Water	300.0	
400-127820-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
400-127820-B-11 MS	Matrix Spike	Total/NA	Water	300.0	

Analysis Batch: 326381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127916-5	MGWC-7	Total/NA	Water	300.0	
400-127916-6	MGWC-1	Total/NA	Water	300.0	
400-127916-7	MGWC-8	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	

Analysis Batch: 326383

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127916-10	DUP-1	Total/NA	Water	300.0	
MB 400-326383/34	Method Blank	Total/NA	Water	300.0	
LCS 400-326383/35	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-326383/36	Lab Control Sample Dup	Total/NA	Water	300.0	
400-128017-A-8 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
400-128017-A-21 MS	Matrix Spike	Total/NA	Water	300.0	

Metals

Prep Batch: 325442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127916-1	MGWA-10	Total/NA	Water	7470A	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-127916-1
 SDG: AP

Metals (Continued)

Prep Batch: 325442 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127916-2	MGWA-11	Total/NA	Water	7470A	
400-127916-3	MGWA-5	Total/NA	Water	7470A	
400-127916-4	MGWA-6	Total/NA	Water	7470A	
400-127916-5	MGWC-7	Total/NA	Water	7470A	
400-127916-6	MGWC-1	Total/NA	Water	7470A	
MB 400-325442/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-325442/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-128132-O-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-128132-O-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 325480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127916-7	MGWC-8	Total/NA	Water	7470A	
400-127916-8	FB-1	Total/NA	Water	7470A	
400-127916-9	FERB-1	Total/NA	Water	7470A	
400-127916-10	DUP-1	Total/NA	Water	7470A	
MB 400-325480/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-325480/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-128090-A-4-B MS	Matrix Spike	Total/NA	Water	7470A	
400-128090-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 325711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127916-1	MGWA-10	Total/NA	Water	7470A	325442
400-127916-2	MGWA-11	Total/NA	Water	7470A	325442
400-127916-3	MGWA-5	Total/NA	Water	7470A	325442
400-127916-4	MGWA-6	Total/NA	Water	7470A	325442
400-127916-5	MGWC-7	Total/NA	Water	7470A	325442
400-127916-6	MGWC-1	Total/NA	Water	7470A	325442
MB 400-325442/14-A	Method Blank	Total/NA	Water	7470A	325442
LCS 400-325442/15-A	Lab Control Sample	Total/NA	Water	7470A	325442
400-128132-O-1-B MS	Matrix Spike	Total/NA	Water	7470A	325442
400-128132-O-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	325442

Prep Batch: 326107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127916-10	DUP-1	Total Recoverable	Water	3005A	
MB 400-326107/1-A ^5 - RA	Method Blank	Total Recoverable	Water	3005A	
MB 400-326107/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-326107/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 400-326107/2-A - RA	Lab Control Sample	Total Recoverable	Water	3005A	
400-128360-I-27-B MS ^5	Matrix Spike	Dissolved	Water	3005A	
400-128360-I-27-C MSD ^5	Matrix Spike Duplicate	Dissolved	Water	3005A	

Prep Batch: 326118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127916-1	MGWA-10	Total Recoverable	Water	3005A	
400-127916-2	MGWA-11	Total Recoverable	Water	3005A	
400-127916-3	MGWA-5	Total Recoverable	Water	3005A	
400-127916-4	MGWA-6	Total Recoverable	Water	3005A	
400-127916-5	MGWC-7	Total Recoverable	Water	3005A	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-127916-1
SDG: AP

Metals (Continued)

Prep Batch: 326118 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127916-6	MGWC-1	Total Recoverable	Water	3005A	
400-127916-7	MGWC-8	Total Recoverable	Water	3005A	
400-127916-8	FB-1	Total Recoverable	Water	3005A	
400-127916-9	FERB-1	Total Recoverable	Water	3005A	
MB 400-326118/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-326118/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-127497-B-10-C MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-127497-B-10-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 326133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127916-7	MGWC-8	Total/NA	Water	7470A	325480
400-127916-8	FB-1	Total/NA	Water	7470A	325480
400-127916-9	FERB-1	Total/NA	Water	7470A	325480
400-127916-10	DUP-1	Total/NA	Water	7470A	325480
MB 400-325480/14-A	Method Blank	Total/NA	Water	7470A	325480
LCS 400-325480/15-A	Lab Control Sample	Total/NA	Water	7470A	325480
400-128090-A-4-B MS	Matrix Spike	Total/NA	Water	7470A	325480
400-128090-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	325480

Analysis Batch: 327106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-326107/1-A ^5	Method Blank	Total Recoverable	Water	6020	326107
LCS 400-326107/2-A	Lab Control Sample	Total Recoverable	Water	6020	326107
400-128360-I-27-B MS ^5	Matrix Spike	Dissolved	Water	6020	326107
400-128360-I-27-C MSD ^5	Matrix Spike Duplicate	Dissolved	Water	6020	326107

Analysis Batch: 327233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127916-10	DUP-1	Total Recoverable	Water	6020	326107
MB 400-326107/1-A ^5 - RA	Method Blank	Total Recoverable	Water	6020	326107
LCS 400-326107/2-A - RA	Lab Control Sample	Total Recoverable	Water	6020	326107

Analysis Batch: 328072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127916-1	MGWA-10	Total Recoverable	Water	6020	326118
400-127916-2	MGWA-11	Total Recoverable	Water	6020	326118
400-127916-3	MGWA-5	Total Recoverable	Water	6020	326118
400-127916-4	MGWA-6	Total Recoverable	Water	6020	326118
400-127916-5	MGWC-7	Total Recoverable	Water	6020	326118
400-127916-6	MGWC-1	Total Recoverable	Water	6020	326118
400-127916-7	MGWC-8	Total Recoverable	Water	6020	326118
400-127916-8	FB-1	Total Recoverable	Water	6020	326118
400-127916-9	FERB-1	Total Recoverable	Water	6020	326118
400-127916-10	DUP-1	Total Recoverable	Water	6020	326107
MB 400-326118/1-A ^5	Method Blank	Total Recoverable	Water	6020	326118
LCS 400-326118/2-A	Lab Control Sample	Total Recoverable	Water	6020	326118
400-127497-B-10-C MS ^5	Matrix Spike	Total Recoverable	Water	6020	326118
400-127497-B-10-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	326118

QC Association Summary

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

TestAmerica Job ID: 400-127916-1
SDG: AP

General Chemistry

Analysis Batch: 324961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127916-1	MGWA-10	Total/NA	Water	SM 2540C	
400-127916-2	MGWA-11	Total/NA	Water	SM 2540C	
400-127916-3	MGWA-5	Total/NA	Water	SM 2540C	
400-127916-4	MGWA-6	Total/NA	Water	SM 2540C	
400-127916-5	MGWC-7	Total/NA	Water	SM 2540C	
400-127916-6	MGWC-1	Total/NA	Water	SM 2540C	
400-127916-7	MGWC-8	Total/NA	Water	SM 2540C	
MB 400-324961/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-324961/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-127916-4 DU	MGWA-6	Total/NA	Water	SM 2540C	

Analysis Batch: 325214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127916-8	FB-1	Total/NA	Water	SM 2540C	
400-127916-9	FERB-1	Total/NA	Water	SM 2540C	
400-127916-10	DUP-1	Total/NA	Water	SM 2540C	
MB 400-325214/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-325214/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-127885-E-2 DU	Duplicate	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-127916-1
SDG: AP

Method: 300.0 - Anions, Ion Chromatography

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

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 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: 400-127916-5 MS
Matrix: Water
Analysis Batch: 326210

Client Sample ID: MGWC-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	13		10.0	22.9		mg/L		100	80 - 120
Fluoride	0.40		10.0	11.3		mg/L		109	80 - 120
Sulfate	160	E	10.0	171	E 4	mg/L		111	80 - 120

Lab Sample ID: MB 400-326212/34
Matrix: Water
Analysis Batch: 326212

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 01:36	1
Fluoride	<0.082		0.20	0.082	mg/L			10/11/16 01:36	1
Sulfate	<0.70		1.0	0.70	mg/L			10/11/16 01:36	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-127916-1
SDG: AP

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 400-326212/35
Matrix: Water
Analysis Batch: 326212

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	10.2		mg/L		102	90 - 110
Sulfate	10.0	10.0		mg/L		100	90 - 110

Lab Sample ID: LCSD 400-326212/36
Matrix: Water
Analysis Batch: 326212

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	10.2		mg/L		102	90 - 110	1	15
Sulfate	10.0	10.0		mg/L		100	90 - 110	0	15

Lab Sample ID: 400-127820-B-1 MSD
Matrix: Water
Analysis Batch: 326212

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	6.3		10.0	15.9		mg/L		96	80 - 120	0	20
Fluoride	<0.082		10.0	10.6		mg/L		106	80 - 120	0	20
Sulfate	0.90	J	10.0	11.2		mg/L		103	80 - 120	0	20

Lab Sample ID: 400-127820-B-11 MS
Matrix: Water
Analysis Batch: 326212

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	6.1		10.0	16.7		mg/L		106	80 - 120
Fluoride	0.17	J	10.0	11.0		mg/L		108	80 - 120
Sulfate	3.2		10.0	14.2		mg/L		110	80 - 120

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 McIntosh

TestAmerica Job ID: 400-127916-1
SDG: AP

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

Lab Sample ID: MB 400-326383/34
Matrix: Water
Analysis Batch: 326383

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			10/12/16 00:48	1
Fluoride	<0.082		0.20	0.082	mg/L			10/12/16 00:48	1
Sulfate	<0.70		1.0	0.70	mg/L			10/12/16 00:48	1

Lab Sample ID: LCS 400-326383/35
Matrix: Water
Analysis Batch: 326383

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	9.66		mg/L		97	90 - 110
Fluoride	10.0	10.1		mg/L		101	90 - 110
Sulfate	10.0	9.92		mg/L		99	90 - 110

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-127916-1
SDG: AP

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 400-326383/36
Matrix: Water
Analysis Batch: 326383

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	1	15
Fluoride	10.0	10.3		mg/L		103	90 - 110	1	15
Sulfate	10.0	10.0		mg/L		100	90 - 110	1	15

Lab Sample ID: 400-128017-A-8 MSD
Matrix: Water
Analysis Batch: 326383

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	390		100	492		mg/L		106	80 - 120	0	20
Fluoride	<0.82		100	106		mg/L		106	80 - 120	0	20
Sulfate	<7.0		100	103		mg/L		103	80 - 120	1	20

Lab Sample ID: 400-128017-A-21 MS
Matrix: Water
Analysis Batch: 326383

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		100	126		mg/L		102	80 - 120
Fluoride	<0.82		100	108		mg/L		108	80 - 120
Sulfate	<7.0		100	106		mg/L		106	80 - 120

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-326107/1-A ^5
Matrix: Water
Analysis Batch: 327106

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 326107

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		10/10/16 13:00	10/17/16 17:00	5

Lab Sample ID: LCS 400-326107/2-A
Matrix: Water
Analysis Batch: 327106

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 326107

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.100	0.0955	^	mg/L		96	80 - 120

Lab Sample ID: MB 400-326118/1-A ^5
Matrix: Water
Analysis Batch: 328072

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 326118

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		10/10/16 13:18	10/24/16 12:38	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/10/16 13:18	10/24/16 12:38	5
Barium	<0.00049		0.0025	0.00049	mg/L		10/10/16 13:18	10/24/16 12:38	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:18	10/24/16 12:38	5
Boron	<0.021		0.050	0.021	mg/L		10/10/16 13:18	10/24/16 12:38	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:18	10/24/16 12:38	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-127916-1
SDG: AP

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

Lab Sample ID: MB 400-326118/1-A ^5
Matrix: Water
Analysis Batch: 328072

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 326118

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Calcium	<0.13		0.25	0.13	mg/L		10/10/16 13:18	10/24/16 12:38	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/10/16 13:18	10/24/16 12:38	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/10/16 13:18	10/24/16 12:38	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/10/16 13:18	10/24/16 12:38	5
Lithium	<0.0032		0.0050	0.0032	mg/L		10/10/16 13:18	10/24/16 12:38	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/10/16 13:18	10/24/16 12:38	5
Selenium	<0.00024	^	0.0013	0.00024	mg/L		10/10/16 13:18	10/24/16 12:38	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/10/16 13:18	10/24/16 12:38	5

Lab Sample ID: LCS 400-326118/2-A
Matrix: Water
Analysis Batch: 328072

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 326118

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
Antimony	0.0500	0.0500		mg/L		100	80 - 120	
Arsenic	0.0500	0.0525		mg/L		105	80 - 120	
Barium	0.0500	0.0484		mg/L		97	80 - 120	
Beryllium	0.0500	0.0518		mg/L		104	80 - 120	
Boron	0.100	0.0973		mg/L		97	80 - 120	
Cadmium	0.0500	0.0497		mg/L		99	80 - 120	
Calcium	5.00	5.15		mg/L		103	80 - 120	
Chromium	0.0500	0.0514		mg/L		103	80 - 120	
Cobalt	0.0500	0.0501		mg/L		100	80 - 120	
Lead	0.0500	0.0485		mg/L		97	80 - 120	
Lithium	0.0500	0.0506		mg/L		101	80 - 120	
Molybdenum	0.0500	0.0497		mg/L		99	80 - 120	
Selenium	0.0500	0.0503	^	mg/L		101	80 - 120	
Thallium	0.0100	0.0101		mg/L		101	80 - 120	

Lab Sample ID: 400-127497-B-10-C MS ^5
Matrix: Water
Analysis Batch: 328072

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 326118

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier		Result	Qualifier					
Antimony	<0.0010		0.0500	0.0534		mg/L		107	75 - 125	
Arsenic	<0.00046		0.0500	0.0542		mg/L		108	75 - 125	
Barium	0.041		0.0500	0.0925		mg/L		103	75 - 125	
Beryllium	<0.00034		0.0500	0.0502		mg/L		100	75 - 125	
Boron	<0.021		0.100	0.107		mg/L		107	75 - 125	
Cadmium	<0.00034		0.0500	0.0515		mg/L		103	75 - 125	
Calcium	8.4		5.00	13.6		mg/L		104	75 - 125	
Chromium	<0.0011		0.0500	0.0532		mg/L		106	75 - 125	
Cobalt	0.0071		0.0500	0.0590		mg/L		104	75 - 125	
Lead	<0.00035		0.0500	0.0485		mg/L		97	75 - 125	
Lithium	<0.0032		0.0500	0.0486		mg/L		97	75 - 125	
Molybdenum	<0.00085		0.0500	0.0510		mg/L		102	75 - 125	
Selenium	<0.00024	^	0.0500	0.0516	^	mg/L		103	75 - 125	
Thallium	<0.000085		0.0100	0.0102		mg/L		102	75 - 125	

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-127916-1
SDG: AP

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

Lab Sample ID: 400-127497-B-10-D MSD ^5

Matrix: Water
Analysis Batch: 328072

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total Recoverable
Prep Batch: 326118

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	Limits	RPD	Limit
				Result	Qualifier						
Antimony	<0.0010		0.0500	0.0524		mg/L		105	75 - 125	2	20
Arsenic	<0.00046		0.0500	0.0544		mg/L		109	75 - 125	0	20
Barium	0.041		0.0500	0.0920		mg/L		102	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0514		mg/L		103	75 - 125	2	20
Boron	<0.021		0.100	0.106		mg/L		106	75 - 125	1	20
Cadmium	<0.00034		0.0500	0.0517		mg/L		103	75 - 125	0	20
Calcium	8.4		5.00	13.7		mg/L		105	75 - 125	0	20
Chromium	<0.0011		0.0500	0.0538		mg/L		108	75 - 125	1	20
Cobalt	0.0071		0.0500	0.0588		mg/L		103	75 - 125	0	20
Lead	<0.00035		0.0500	0.0481		mg/L		96	75 - 125	1	20
Lithium	<0.0032		0.0500	0.0487		mg/L		97	75 - 125	0	20
Molybdenum	<0.00085		0.0500	0.0509		mg/L		102	75 - 125	0	20
Selenium	<0.00024	^	0.0500	0.0510	^	mg/L		102	75 - 125	1	20
Thallium	<0.00085		0.0100	0.0103		mg/L		103	75 - 125	2	20

Lab Sample ID: 400-128360-I-27-B MS ^5

Matrix: Water
Analysis Batch: 327106

Client Sample ID: Matrix Spike

Prep Type: Dissolved
Prep Batch: 326107

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	Limits	RPD	Limit
				Result	Qualifier						
Antimony	<0.0010	^	0.0500	0.0486	^	mg/L		97	75 - 125		
Arsenic	0.035		0.0500	0.0879		mg/L		107	75 - 125		
Barium	0.23	^	0.0500	0.280	^ 4	mg/L		100	75 - 125		
Beryllium	<0.00034		0.0500	0.0487		mg/L		97	75 - 125		
Boron	0.15	^	0.100	0.258		mg/L		110	75 - 125		
Cadmium	<0.00034	^	0.0500	0.0477	^	mg/L		95	75 - 125		
Chromium	<0.0011		0.0500	0.0511		mg/L		102	75 - 125		
Cobalt	0.00059	J	0.0500	0.0553		mg/L		109	75 - 125		
Lead	0.00050	J	0.0500	0.0443		mg/L		88	75 - 125		
Lithium	<0.0032	^	0.0500	0.0392	^	mg/L		78	75 - 125		
Molybdenum	0.0047	J	0.0500	0.0565		mg/L		104	75 - 125		
Selenium	<0.00024		0.0500	0.0519		mg/L		104	75 - 125		
Thallium	<0.00085	^	0.0100	0.00901	^	mg/L		90	75 - 125		

Lab Sample ID: 400-128360-I-27-C MSD ^5

Matrix: Water
Analysis Batch: 327106

Client Sample ID: Matrix Spike Duplicate

Prep Type: Dissolved
Prep Batch: 326107

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	Limits	RPD	Limit
				Result	Qualifier						
Antimony	<0.0010	^	0.0500	0.0466	^	mg/L		93	75 - 125	4	20
Arsenic	0.035		0.0500	0.0874		mg/L		106	75 - 125	1	20
Barium	0.23	^	0.0500	0.277	^ 4	mg/L		93	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0497		mg/L		99	75 - 125	2	20
Boron	0.15	^	0.100	0.257		mg/L		108	75 - 125	1	20
Cadmium	<0.00034	^	0.0500	0.0475	^	mg/L		95	75 - 125	0	20
Chromium	<0.0011		0.0500	0.0517		mg/L		103	75 - 125	1	20
Cobalt	0.00059	J	0.0500	0.0560		mg/L		111	75 - 125	1	20
Lead	0.00050	J	0.0500	0.0447		mg/L		88	75 - 125	1	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-127916-1
SDG: AP

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

Lab Sample ID: 400-128360-I-27-C MSD ^5
Matrix: Water
Analysis Batch: 327106

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 326107

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Lithium	<0.0032	^	0.0500	0.0435	^	mg/L		87	75 - 125	10	20
Molybdenum	0.0047	J	0.0500	0.0565		mg/L		104	75 - 125	0	20
Selenium	<0.00024		0.0500	0.0518		mg/L		104	75 - 125	0	20
Thallium	<0.000085	^	0.0100	0.00908	^	mg/L		91	75 - 125	1	20

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

Lab Sample ID: MB 400-326107/1-A ^5
Matrix: Water
Analysis Batch: 327233

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 326107

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony - RA	<0.0010		0.0025	0.0010	mg/L		10/10/16 13:00	10/18/16 13:55	5
Arsenic - RA	<0.00046		0.0013	0.00046	mg/L		10/10/16 13:00	10/18/16 13:55	5
Barium - RA	<0.00049		0.0025	0.00049	mg/L		10/10/16 13:00	10/18/16 13:55	5
Beryllium - RA	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:00	10/18/16 13:55	5
Cadmium - RA	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:00	10/18/16 13:55	5
Calcium - RA	<0.13		0.25	0.13	mg/L		10/10/16 13:00	10/18/16 13:55	5
Chromium - RA	<0.0011		0.0025	0.0011	mg/L		10/10/16 13:00	10/18/16 13:55	5
Cobalt - RA	<0.00040		0.0025	0.00040	mg/L		10/10/16 13:00	10/18/16 13:55	5
Lead - RA	<0.00035		0.0013	0.00035	mg/L		10/10/16 13:00	10/18/16 13:55	5
Lithium - RA	<0.0032		0.0050	0.0032	mg/L		10/10/16 13:00	10/18/16 13:55	5
Molybdenum - RA	<0.00085		0.015	0.00085	mg/L		10/10/16 13:00	10/18/16 13:55	5
Selenium - RA	<0.00024		0.0013	0.00024	mg/L		10/10/16 13:00	10/18/16 13:55	5
Thallium - RA	<0.000085		0.00050	0.000085	mg/L		10/10/16 13:00	10/18/16 13:55	5

Lab Sample ID: LCS 400-326107/2-A
Matrix: Water
Analysis Batch: 327233

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 326107

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Antimony - RA	0.0500	0.0519		mg/L		104	80 - 120
Arsenic - RA	0.0500	0.0512		mg/L		102	80 - 120
Barium - RA	0.0500	0.0447		mg/L		89	80 - 120
Beryllium - RA	0.0500	0.0492		mg/L		98	80 - 120
Cadmium - RA	0.0500	0.0487		mg/L		97	80 - 120
Calcium - RA	5.00	5.02		mg/L		100	80 - 120
Chromium - RA	0.0500	0.0496		mg/L		99	80 - 120
Cobalt - RA	0.0500	0.0471		mg/L		94	80 - 120
Lead - RA	0.0500	0.0542		mg/L		108	80 - 120
Lithium - RA	0.0500	0.0492		mg/L		98	80 - 120
Molybdenum - RA	0.0500	0.0485		mg/L		97	80 - 120
Selenium - RA	0.0500	0.0502		mg/L		100	80 - 120
Thallium - RA	0.0100	0.00997		mg/L		100	80 - 120

QC Sample Results

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

TestAmerica Job ID: 400-127916-1
SDG: AP

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-325442/14-A
Matrix: Water
Analysis Batch: 325711

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 325442

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/05/16 09:04	10/06/16 14:31	1

Lab Sample ID: LCS 400-325442/15-A
Matrix: Water
Analysis Batch: 325711

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 325442

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00105		mg/L		104	80 - 120

Lab Sample ID: 400-128132-O-1-B MS
Matrix: Water
Analysis Batch: 325711

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 325442

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00201		mg/L		100	80 - 120

Lab Sample ID: 400-128132-O-1-C MSD
Matrix: Water
Analysis Batch: 325711

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 325442

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00191		mg/L		95	80 - 120	5	20

Lab Sample ID: MB 400-325480/14-A
Matrix: Water
Analysis Batch: 326133

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 325480

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/05/16 12:56	10/10/16 10:13	1

Lab Sample ID: LCS 400-325480/15-A
Matrix: Water
Analysis Batch: 326133

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 325480

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00104		mg/L		103	80 - 120

Lab Sample ID: 400-128090-A-4-B MS
Matrix: Water
Analysis Batch: 326133

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 325480

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070	F1	0.00201	0.00159	F1	mg/L		79	80 - 120

Lab Sample ID: 400-128090-A-4-C MSD
Matrix: Water
Analysis Batch: 326133

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 325480

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070	F1	0.00201	0.00160		mg/L		80	80 - 120	1	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-127916-1
 SDG: AP

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

Lab Sample ID: MB 400-324961/1
Matrix: Water
Analysis Batch: 324961

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	<1.7		2.5	1.7	mg/L			10/01/16 17:33	1

Lab Sample ID: LCS 400-324961/2
Matrix: Water
Analysis Batch: 324961

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	147	141		mg/L		96	78 - 122

Lab Sample ID: 400-127916-4 DU
Matrix: Water
Analysis Batch: 324961

Client Sample ID: MGWA-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	170		172		mg/L		0.6	5

Lab Sample ID: MB 400-325214/1
Matrix: Water
Analysis Batch: 325214

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			10/04/16 11:35	1

Lab Sample ID: LCS 400-325214/2
Matrix: Water
Analysis Batch: 325214

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	256		mg/L		87	78 - 122

Lab Sample ID: 400-127885-E-2 DU
Matrix: Water
Analysis Batch: 325214

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	920		918		mg/L		0	5

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

Chain of Custody Record

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Client Information		Lab Fax: Whitmore, Creyenne R		COC No:		
ERIM - T. Payne, M. Rogers, J. Wandell		E-Mail: chreyenne.whitmore@testamericainc.com		Page: 1 of 1		
Phone: 678-486-2700		w.v.w.s.g.		Job #: 400-127916		
Southern Company				Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amshlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		
Due Date Requested:		Analysis Requested		Special Instructions/Note:		
TAT Requested (days):		Metals Appendix III & IV - EPA 6020 & EPA 7470		MGA-10 Extra Red bottle filled for Lab QA/QC		
PO #:		TSP - SM 2940C: Cl.P.804 - EPA 300				
IWO #:		Radium 226 & 228 - 9W-040 9315 & 9320				
Project #:		TAT Requested (days):				
SSOW#:		Due Date Requested:				
AP		TAT Requested (days):				
Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-grab)	Matrix (Water, Swab, Overstink, etc.)	Analysis Requested	Special Instructions/Note
MGA-10	9/28/16	1150	G	W		
MGA-11	9/28/16	1210	G	W		
MGA-5	9/28/16	1332	G	W		
MGA-6	9/28/16	1408	G	W		
MGWC-7	9/28/16	1538	G	W		
MGWC-1	9/28/16	1527	G	W		
MGWC-8	9/28/16	1545	G	W		
FB-1	9/28/16	1600	G	W		
FERB-1	9/28/16	1615	G	W		
DUP-1	9/28/16	—	G	W		

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Reinquished by: _____ Date: _____

Relinquished by: *William J.* Date: 9/28/16 1800 Company: *ERM*

Relinquished by: *Ray D.* Date: 9/28/16 1800 Company: *MA*

Relinquished by: *Ray D.* Date: 9/30/16 9:54 Company: *MA*

Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seal No.: 00C 116 RP-5



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-127916-1

SDG Number: AP

Login Number: 127916

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.3°C, 3.3°C
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 McIntosh

TestAmerica Job ID: 400-127916-1
 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
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.



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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-127916-2

TestAmerica Sample Delivery Group: AP

Client Project/Site: CCR - Plant McIntosh

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

11/14/2016 9:49:38 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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

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

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Case Narrative

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

TestAmerica Job ID: 400-127916-2
SDG: AP

Job ID: 400-127916-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-127916-2

RAD

Method(s) 9320: Radium-228 Prep Batch 160-274655: The radium-228 detection goal was not met for the following sample due to insufficient volume remaining for re-analysis and the lower barium carrier recovery (50.4%) due to the possible presence of matrix interferences: DUP-1 (400-127916-10). Analytical results are reported with the detection limit achieved.

Method(s) PrecSep_0: Radium-228 Prep Batch 160-274655: The following samples were prepared at a reduced aliquot due to limited volume left after re-analysis: MGWA-10 (400-127916-1), MGWA-10 (400-127916-1[DU]), MGWA-11 (400-127916-2), MGWA-5 (400-127916-3), MGWA-6 (400-127916-4), MGWC-7 (400-127916-5), MGWC-1 (400-127916-6), MGWC-8 (400-127916-7), FB-1 (400-127916-8), FERB-1 (400-127916-9) and DUP-1 (400-127916-10).

Method(s) PrecSep-21: Radium-226 Prep Batch 160-274647: The following samples were prepared at a reduced aliquot due to limited volume left after re-analysis: MGWA-10 (400-127916-1), MGWA-10 (400-127916-1[DU]), MGWA-11 (400-127916-2), MGWA-5 (400-127916-3), MGWA-6 (400-127916-4), MGWC-7 (400-127916-5), MGWC-1 (400-127916-6), MGWC-8 (400-127916-7), FB-1 (400-127916-8), FERB-1 (400-127916-9) and DUP-1 (400-127916-10).

Method Summary

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

TestAmerica Job ID: 400-127916-2
SDG: AP

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 McIntosh

TestAmerica Job ID: 400-127916-2
SDG: AP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-127916-1	MGWA-10	Water	09/28/16 11:50	09/28/16 18:00
400-127916-2	MGWA-11	Water	09/28/16 12:10	09/28/16 18:00
400-127916-3	MGWA-5	Water	09/28/16 13:32	09/28/16 18:00
400-127916-4	MGWA-6	Water	09/28/16 14:08	09/28/16 18:00
400-127916-5	MGWC-7	Water	09/28/16 15:38	09/28/16 18:00
400-127916-6	MGWC-1	Water	09/28/16 15:27	09/28/16 18:00
400-127916-7	MGWC-8	Water	09/28/16 15:45	09/28/16 18:00
400-127916-8	FB-1	Water	09/28/16 16:00	09/28/16 18:00
400-127916-9	FERB-1	Water	09/28/16 16:15	09/28/16 18:00
400-127916-10	DUP-1	Water	09/28/16 00:00	09/28/16 18:00

Client Sample Results

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

TestAmerica Job ID: 400-127916-2
SDG: AP

Client Sample ID: MGWA-10

Lab Sample ID: 400-127916-1

Date Collected: 09/28/16 11:50

Matrix: Water

Date Received: 09/28/16 18:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.630		0.242	0.248	1.00	0.278	pCi/L	10/14/16 16:44	11/09/16 07:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					10/14/16 16:44	11/09/16 07:09	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.140	U	0.318	0.318	1.00	0.547	pCi/L	10/14/16 17:37	11/08/16 20:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					10/14/16 17:37	11/08/16 20:01	1
Y Carrier	78.9		40 - 110					10/14/16 17:37	11/08/16 20:01	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.770		0.399	0.403	5.00	0.547	pCi/L		11/11/16 15:16	1

Client Sample Results

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

TestAmerica Job ID: 400-127916-2
 SDG: AP

Client Sample ID: MGWA-11

Lab Sample ID: 400-127916-2

Date Collected: 09/28/16 12:10

Matrix: Water

Date Received: 09/28/16 18:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.288	U	0.245	0.247	1.00	0.384	pCi/L	10/14/16 16:44	11/09/16 07:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.8		40 - 110					10/14/16 16:44	11/09/16 07:10	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.233	U	0.369	0.370	1.00	0.623	pCi/L	10/14/16 17:37	11/08/16 20:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.8		40 - 110					10/14/16 17:37	11/08/16 20:02	1
Y Carrier	78.1		40 - 110					10/14/16 17:37	11/08/16 20:02	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	0.521	U	0.443	0.445	5.00	0.623	pCi/L		11/11/16 15:16	1

Client Sample Results

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

TestAmerica Job ID: 400-127916-2
 SDG: AP

Client Sample ID: MGWA-5

Lab Sample ID: 400-127916-3

Date Collected: 09/28/16 13:32

Matrix: Water

Date Received: 09/28/16 18:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0866	U	0.146	0.147	1.00	0.255	pCi/L	10/14/16 16:44	11/09/16 07:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					10/14/16 16:44	11/09/16 07:10	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0205	U	0.349	0.349	1.00	0.622	pCi/L	10/14/16 17:37	11/08/16 20:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.0		40 - 110					10/14/16 17:37	11/08/16 20:02	1
Y Carrier	76.6		40 - 110					10/14/16 17:37	11/08/16 20:02	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	0.107	U	0.378	0.378	5.00	0.622	pCi/L		11/11/16 15:16	1

Client Sample Results

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

TestAmerica Job ID: 400-127916-2
 SDG: AP

Client Sample ID: MGWA-6
Date Collected: 09/28/16 14:08
Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-4
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	0.497		0.223	0.227	1.00	0.270	pCi/L	10/14/16 16:44	11/09/16 07:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.0		40 - 110					10/14/16 16:44	11/09/16 07:10	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.429	U	0.457	0.459	1.00	0.748	pCi/L	10/14/16 17:37	11/08/16 20:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.0		40 - 110					10/14/16 17:37	11/08/16 20:02	1
Y Carrier	63.9		40 - 110					10/14/16 17:37	11/08/16 20:02	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	0.926		0.509	0.512	5.00	0.748	pCi/L		11/11/16 15:16	1

Client Sample Results

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

TestAmerica Job ID: 400-127916-2
 SDG: AP

Client Sample ID: MGWC-7
Date Collected: 09/28/16 15:38
Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-5
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	0.848		0.274	0.284	1.00	0.298	pCi/L	10/14/16 16:44	11/09/16 07:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.6		40 - 110					10/14/16 16:44	11/09/16 07:11	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.213	U	0.362	0.363	1.00	0.613	pCi/L	10/14/16 17:37	11/08/16 20:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.6		40 - 110					10/14/16 17:37	11/08/16 20:02	1
Y Carrier	74.4		40 - 110					10/14/16 17:37	11/08/16 20:02	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.06		0.454	0.461	5.00	0.613	pCi/L		11/11/16 15:16	1

Client Sample Results

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

TestAmerica Job ID: 400-127916-2
 SDG: AP

Client Sample ID: MGWC-1

Lab Sample ID: 400-127916-6

Date Collected: 09/28/16 15:27

Matrix: Water

Date Received: 09/28/16 18:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.787		0.295	0.303	1.00	0.372	pCi/L	10/14/16 16:44	11/09/16 07:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					10/14/16 16:44	11/09/16 07:11	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.307	U	0.317	0.318	1.00	0.515	pCi/L	10/14/16 17:37	11/08/16 20:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					10/14/16 17:37	11/08/16 20:02	1
Y Carrier	78.1		40 - 110					10/14/16 17:37	11/08/16 20:02	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	1.09		0.433	0.439	5.00	0.515	pCi/L		11/11/16 15:16	1

Client Sample Results

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

TestAmerica Job ID: 400-127916-2
 SDG: AP

Client Sample ID: MGWC-8

Lab Sample ID: 400-127916-7

Date Collected: 09/28/16 15:45

Matrix: Water

Date Received: 09/28/16 18:00

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.926		0.293	0.305	1.00	0.319	pCi/L	10/14/16 16:44	11/09/16 07:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					10/14/16 16:44	11/09/16 07:11	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.25		0.506	0.519	1.00	0.724	pCi/L	10/14/16 17:37	11/08/16 20:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.2		40 - 110					10/14/16 17:37	11/08/16 20:03	1
Y Carrier	74.4		40 - 110					10/14/16 17:37	11/08/16 20:03	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	2.17		0.585	0.602	5.00	0.724	pCi/L		11/11/16 15:16	1

Client Sample Results

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

TestAmerica Job ID: 400-127916-2
 SDG: AP

Client Sample ID: FB-1
Date Collected: 09/28/16 16:00
Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-8
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	0.0840	U	0.216	0.216	1.00	0.382	pCi/L	10/14/16 16:44	11/09/16 07:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.1		40 - 110					10/14/16 16:44	11/09/16 07:11	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.257	U	0.471	0.472	1.00	0.799	pCi/L	10/14/16 17:37	11/08/16 20:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.1		40 - 110					10/14/16 17:37	11/08/16 20:04	1
Y Carrier	69.2		40 - 110					10/14/16 17:37	11/08/16 20:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.341	U	0.518	0.519	5.00	0.799	pCi/L		11/11/16 15:16	1

Client Sample Results

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

TestAmerica Job ID: 400-127916-2
 SDG: AP

Client Sample ID: FERB-1
Date Collected: 09/28/16 16:15
Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-9
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	0.0243	U	0.185	0.185	1.00	0.343	pCi/L	10/14/16 17:07	11/09/16 07:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					10/14/16 17:07	11/09/16 07:11	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0976	U	0.359	0.359	1.00	0.626	pCi/L	10/14/16 17:37	11/08/16 20:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.7		40 - 110					10/14/16 17:37	11/08/16 20:04	1
Y Carrier	77.8		40 - 110					10/14/16 17:37	11/08/16 20:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.122	U	0.404	0.404	5.00	0.626	pCi/L		11/11/16 15:16	1

Client Sample Results

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

TestAmerica Job ID: 400-127916-2
 SDG: AP

Client Sample ID: DUP-1
Date Collected: 09/28/16 00:00
Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-10
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	1.45		0.422	0.441	1.00	0.424	pCi/L	10/14/16 17:07	11/09/16 07:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	50.4		40 - 110					10/14/16 17:07	11/09/16 07:11	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.314	U G	0.666	0.666	1.00	1.14	pCi/L	10/14/16 17:37	11/08/16 20:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	50.4		40 - 110					10/14/16 17:37	11/08/16 20:04	1
Y Carrier	75.1		40 - 110					10/14/16 17:37	11/08/16 20:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.76		0.788	0.799	5.00	1.14	pCi/L		11/11/16 15:16	1

Definitions/Glossary

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

TestAmerica Job ID: 400-127916-2
SDG: AP

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
G	The Sample MDC is greater than the requested RL.

Glossary

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

TestAmerica Job ID: 400-127916-2
SDG: AP

Client Sample ID: MGWA-10

Date Collected: 09/28/16 11:50

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			274647	10/14/16 16:44	AS	TAL SL
Total/NA	Analysis	9315		1	278436	11/09/16 07:09	RTM	TAL SL
Total/NA	Prep	PrecSep_0			274655	10/14/16 17:37	CMC	TAL SL
Total/NA	Analysis	9320		1	278291	11/08/16 20:01	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278925	11/11/16 15:16	RTM	TAL SL

Client Sample ID: MGWA-11

Date Collected: 09/28/16 12:10

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			274647	10/14/16 16:44	AS	TAL SL
Total/NA	Analysis	9315		1	278436	11/09/16 07:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			274655	10/14/16 17:37	CMC	TAL SL
Total/NA	Analysis	9320		1	278291	11/08/16 20:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278925	11/11/16 15:16	RTM	TAL SL

Client Sample ID: MGWA-5

Date Collected: 09/28/16 13:32

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			274647	10/14/16 16:44	AS	TAL SL
Total/NA	Analysis	9315		1	278436	11/09/16 07:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			274655	10/14/16 17:37	CMC	TAL SL
Total/NA	Analysis	9320		1	278291	11/08/16 20:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278925	11/11/16 15:16	RTM	TAL SL

Client Sample ID: MGWA-6

Date Collected: 09/28/16 14:08

Date Received: 09/28/16 18:00

Lab Sample ID: 400-127916-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			274647	10/14/16 16:44	AS	TAL SL
Total/NA	Analysis	9315		1	278436	11/09/16 07:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			274655	10/14/16 17:37	CMC	TAL SL
Total/NA	Analysis	9320		1	278291	11/08/16 20:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278925	11/11/16 15:16	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-127916-2
SDG: AP

Client Sample ID: MGWC-7

Lab Sample ID: 400-127916-5

Date Collected: 09/28/16 15:38

Matrix: Water

Date Received: 09/28/16 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			274647	10/14/16 16:44	AS	TAL SL
Total/NA	Analysis	9315		1	278436	11/09/16 07:11	RTM	TAL SL
Total/NA	Prep	PrecSep_0			274655	10/14/16 17:37	CMC	TAL SL
Total/NA	Analysis	9320		1	278291	11/08/16 20:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278925	11/11/16 15:16	RTM	TAL SL

Client Sample ID: MGWC-1

Lab Sample ID: 400-127916-6

Date Collected: 09/28/16 15:27

Matrix: Water

Date Received: 09/28/16 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			274647	10/14/16 16:44	AS	TAL SL
Total/NA	Analysis	9315		1	278436	11/09/16 07:11	RTM	TAL SL
Total/NA	Prep	PrecSep_0			274655	10/14/16 17:37	CMC	TAL SL
Total/NA	Analysis	9320		1	278291	11/08/16 20:02	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278925	11/11/16 15:16	RTM	TAL SL

Client Sample ID: MGWC-8

Lab Sample ID: 400-127916-7

Date Collected: 09/28/16 15:45

Matrix: Water

Date Received: 09/28/16 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			274647	10/14/16 16:44	AS	TAL SL
Total/NA	Analysis	9315		1	278436	11/09/16 07:11	RTM	TAL SL
Total/NA	Prep	PrecSep_0			274655	10/14/16 17:37	CMC	TAL SL
Total/NA	Analysis	9320		1	278294	11/08/16 20:03	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278925	11/11/16 15:16	RTM	TAL SL

Client Sample ID: FB-1

Lab Sample ID: 400-127916-8

Date Collected: 09/28/16 16:00

Matrix: Water

Date Received: 09/28/16 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			274647	10/14/16 16:44	AS	TAL SL
Total/NA	Analysis	9315		1	278436	11/09/16 07:11	RTM	TAL SL
Total/NA	Prep	PrecSep_0			274655	10/14/16 17:37	CMC	TAL SL
Total/NA	Analysis	9320		1	278294	11/08/16 20:04	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278925	11/11/16 15:16	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-127916-2
SDG: AP

Client Sample ID: FERB-1

Lab Sample ID: 400-127916-9

Date Collected: 09/28/16 16:15

Matrix: Water

Date Received: 09/28/16 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			274647	10/14/16 17:07	AS	TAL SL
Total/NA	Analysis	9315		1	278436	11/09/16 07:11	RTM	TAL SL
Total/NA	Prep	PrecSep_0			274655	10/14/16 17:37	CMC	TAL SL
Total/NA	Analysis	9320		1	278294	11/08/16 20:04	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278925	11/11/16 15:16	RTM	TAL SL

Client Sample ID: DUP-1

Lab Sample ID: 400-127916-10

Date Collected: 09/28/16 00:00

Matrix: Water

Date Received: 09/28/16 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			274647	10/14/16 17:07	AS	TAL SL
Total/NA	Analysis	9315		1	278436	11/09/16 07:11	RTM	TAL SL
Total/NA	Prep	PrecSep_0			274655	10/14/16 17:37	CMC	TAL SL
Total/NA	Analysis	9320		1	278294	11/08/16 20:04	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	278925	11/11/16 15:16	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 McIntosh

TestAmerica Job ID: 400-127916-2
SDG: AP

Rad

Prep Batch: 274647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127916-1	MGWA-10	Total/NA	Water	PrecSep-21	
400-127916-2	MGWA-11	Total/NA	Water	PrecSep-21	
400-127916-3	MGWA-5	Total/NA	Water	PrecSep-21	
400-127916-4	MGWA-6	Total/NA	Water	PrecSep-21	
400-127916-5	MGWC-7	Total/NA	Water	PrecSep-21	
400-127916-6	MGWC-1	Total/NA	Water	PrecSep-21	
400-127916-7	MGWC-8	Total/NA	Water	PrecSep-21	
400-127916-8	FB-1	Total/NA	Water	PrecSep-21	
400-127916-9	FERB-1	Total/NA	Water	PrecSep-21	
400-127916-10	DUP-1	Total/NA	Water	PrecSep-21	
MB 160-274647/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-274647/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-127916-1 DU	MGWA-10	Total/NA	Water	PrecSep-21	

Prep Batch: 274655

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-127916-1	MGWA-10	Total/NA	Water	PrecSep_0	
400-127916-2	MGWA-11	Total/NA	Water	PrecSep_0	
400-127916-3	MGWA-5	Total/NA	Water	PrecSep_0	
400-127916-4	MGWA-6	Total/NA	Water	PrecSep_0	
400-127916-5	MGWC-7	Total/NA	Water	PrecSep_0	
400-127916-6	MGWC-1	Total/NA	Water	PrecSep_0	
400-127916-7	MGWC-8	Total/NA	Water	PrecSep_0	
400-127916-8	FB-1	Total/NA	Water	PrecSep_0	
400-127916-9	FERB-1	Total/NA	Water	PrecSep_0	
400-127916-10	DUP-1	Total/NA	Water	PrecSep_0	
MB 160-274655/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-274655/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-127916-1 DU	MGWA-10	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-127916-2
SDG: AP

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-274647/1-A
Matrix: Water
Analysis Batch: 278453

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 274647

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.09061	U	0.164	0.164	1.00	0.287	pCi/L	10/14/16 16:44	11/09/16 07:01	1
Carrier	%Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110					10/14/16 16:44	11/09/16 07:01	1

Lab Sample ID: LCS 160-274647/2-A
Matrix: Water
Analysis Batch: 278453

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 274647

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	14.8	19.27		2.07	1.00	0.353	pCi/L	130	68 - 137
Carrier	%Yield	LCS Qualifier	Limits						
Ba Carrier	80.6		40 - 110						

Lab Sample ID: 400-127916-1 DU
Matrix: Water
Analysis Batch: 278436

Client Sample ID: MGWA-10
Prep Type: Total/NA
Prep Batch: 274647

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.630		0.2561	U	0.207	1.00	0.314	pCi/L	0.82	1
Carrier	%Yield	DU Qualifier	Limits							
Ba Carrier	89.5		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-274655/1-A
Matrix: Water
Analysis Batch: 278266

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 274655

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.1984	U	0.467	0.467	1.00	0.851	pCi/L	10/14/16 17:37	11/08/16 19:54	1
Carrier	%Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110					10/14/16 17:37	11/08/16 19:54	1
Y Carrier	70.7		40 - 110					10/14/16 17:37	11/08/16 19:54	1

QC Sample Results

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

TestAmerica Job ID: 400-127916-2
 SDG: AP

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

Lab Sample ID: LCS 160-274655/2-A
Matrix: Water
Analysis Batch: 278266

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 274655

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	19.1	24.83		2.74	1.00	0.779	pCi/L	130	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	80.6		40 - 110
Y Carrier	66.5		40 - 110

Lab Sample ID: 400-127916-1 DU
Matrix: Water
Analysis Batch: 278291

Client Sample ID: MGWA-10
Prep Type: Total/NA
Prep Batch: 274655

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.140	U	0.3419	U	0.364	1.00	0.593	pCi/L	0.30	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	89.5		40 - 110
Y Carrier	79.3		40 - 110

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

Lab Sample ID: 400-127916-1 DU
Matrix: Water
Analysis Batch: 278925

Client Sample ID: MGWA-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	0.770		0.5980		0.419	5.00	0.593	pCi/L	0.21	

TestAmerica Pensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001, Fax (850) 478-2871

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information Client Contact: Jopu Abraham Company: Southern Company Address: 241 Ralph McGill Blvd SE B10185 City: Atlanta State, Zip: GA, 30303 Phone: 404-506-7239 Email: JAbraham@southernco.com Project Name: CCR - Plant McIntosh Site: AP		Lab Fax: Whitmore, Creyenne R Email: chreyenne.whitmore@testamericainc.com Due Date Requested: 9/28/16 TAT Requested (days): 7		Sampler: TP ERM - T. Payne, M. Rogers, J. Wandell Phone: 678-486-2700 W.V. V. S.		Cantar Tracking No(s): Page: 1 of 1 Job #: 400-127916	
Analysis Requested Metals Appendix III & IV - EPA 8220 & EPA 7470 Radium 226 & 228 - SW-846 9215 & 9220 TDS - SM 2540C: Cl, F, SO4 - EPA 800		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amshlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		Special Instructions/Note: MGA-10 Extra Red bottle Filled for Lab QA/QC			
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=Soil, O=Other, G=Gas, P=Particulate, A=Air)	Analysis Requested	Special Instructions/Note	
MGA-10	9/28/16	1150	G	W			
MGA-11	9/28/16	1210	G	W			
MGA-5	9/28/16	1332	G	W			
MGA-6	9/28/16	1408	G	W			
MGWC-7	9/28/16	1538	G	W			
MGWC-1	9/28/16	1527	G	W			
MGWC-8	9/28/16	1545	G	W			
FB-1	9/28/16	1600	G	W			
FERB-1	9/28/16	1615	G	W			
DUP-1	9/28/16	—	G	W			

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Reinquished by: _____ Date: _____
 Relinquished by: *William J* Date: 9/28/16 1800 Company: *ERM*
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____

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 provide results to Maria Padilla and Heath McConkle

Method of Shipment: _____
 Received by: *Ree Dy* Date: 9/28/16 1800 Company: *MA*
 Received by: *Byron Slides* Date/Time: 9/30/16 9:54 Company: *MA*
 Received by: _____ Date/Time: _____ Company: _____

Cooler Temperature/Type and Other Remarks: 00C 11C 12C 12.5



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-127916-2

SDG Number: AP

Login Number: 127916

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.3°C, 3.3°C
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 McIntosh

TestAmerica Job ID: 400-127916-2
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
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 McIntosh

TestAmerica Job ID: 400-127916-2
SDG: AP

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
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: 400-128049-1

TestAmerica Sample Delivery Group: AP

Client Project/Site: CCR - Plant McIntosh

For:

Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

10/26/2016 4:29:00 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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

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

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

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Case Narrative

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

TestAmerica Job ID: 400-128049-1
SDG: AP

Job ID: 400-128049-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-128049-1

HPLC/IC

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MGWC-3 (400-128049-1) and MGWC-2 (400-128049-2). 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: MGWC-2 (400-128049-2). Elevated reporting limits (RLs) are provided.

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Detection Summary

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

TestAmerica Job ID: 400-128049-1
SDG: AP

Client Sample ID: MGWC-3

Lab Sample ID: 400-128049-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.082	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	94		5.0	3.5	mg/L	5		300.0	Total/NA
Arsenic	0.0013		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.14		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	100		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00054	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.010		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Boron - RA	1.0		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: MGWC-2

Lab Sample ID: 400-128049-2

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
Sulfate	280		10	7.0	mg/L	10		300.0	Total/NA
Barium	0.053		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cobalt	0.0032		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0048	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Boron - DL	3.1		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	140		1.3	0.63	mg/L	25		6020	Total Recoverable
Cadmium - RA	0.0027		0.0025	0.00034	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	640		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-12

Lab Sample ID: 400-128049-3

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
Fluoride	0.26		0.20	0.082	mg/L	1		300.0	Total/NA
Arsenic	0.0019		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.052		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	30		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.017		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0014	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	190		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 McIntosh

TestAmerica Job ID: 400-128049-1
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 McIntosh

TestAmerica Job ID: 400-128049-1
SDG: AP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-128049-1	MGWC-3	Water	09/29/16 08:28	10/01/16 08:57
400-128049-2	MGWC-2	Water	09/29/16 08:49	10/01/16 08:57
400-128049-3	MGWC-12	Water	09/29/16 08:24	10/01/16 08:57

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Client Sample Results

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

TestAmerica Job ID: 400-128049-1
SDG: AP

Client Sample ID: MGWC-3

Lab Sample ID: 400-128049-1

Date Collected: 09/29/16 08:28

Matrix: Water

Date Received: 10/01/16 08:57

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		1.0	0.89	mg/L			10/15/16 15:08	1
Fluoride	0.082	J	0.20	0.082	mg/L			10/15/16 15:08	1
Sulfate	94		5.0	3.5	mg/L			10/17/16 20:34	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		10/10/16 13:00	10/19/16 00:29	5
Arsenic	0.0013		0.0013	0.00046	mg/L		10/10/16 13:00	10/19/16 00:29	5
Barium	0.14		0.0025	0.00049	mg/L		10/10/16 13:00	10/19/16 00:29	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:00	10/19/16 00:29	5
Calcium	100		0.25	0.13	mg/L		10/10/16 13:00	10/19/16 00:29	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/10/16 13:00	10/19/16 00:29	5
Cobalt	0.00054	J	0.0025	0.00040	mg/L		10/10/16 13:00	10/19/16 00:29	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/10/16 13:00	10/19/16 00:29	5
Lithium	0.010		0.0050	0.0032	mg/L		10/10/16 13:00	10/19/16 00:29	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/10/16 13:00	10/19/16 00:29	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/10/16 13:00	10/19/16 00:29	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.0		0.050	0.021	mg/L		10/10/16 13:00	10/24/16 17:07	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:00	10/24/16 17:07	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/10/16 13:00	10/24/16 17:07	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		10/10/16 10:59	10/14/16 13:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	380		5.0	3.4	mg/L			10/04/16 15:59	1

Client Sample Results

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

TestAmerica Job ID: 400-128049-1
SDG: AP

Client Sample ID: MGWC-2

Lab Sample ID: 400-128049-2

Date Collected: 09/29/16 08:49

Matrix: Water

Date Received: 10/01/16 08:57

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			10/15/16 15:54	1
Fluoride	<0.082		0.20	0.082	mg/L			10/15/16 15:54	1
Sulfate	280		10	7.0	mg/L			10/17/16 20:57	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		10/10/16 13:00	10/19/16 00:34	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		10/10/16 13:00	10/19/16 00:34	5
Barium	0.053		0.0025	0.00049	mg/L		10/10/16 13:00	10/19/16 00:34	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:00	10/19/16 00:34	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/10/16 13:00	10/19/16 00:34	5
Cobalt	0.0032		0.0025	0.00040	mg/L		10/10/16 13:00	10/19/16 00:34	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/10/16 13:00	10/19/16 00:34	5
Lithium	0.0048 J		0.0050	0.0032	mg/L		10/10/16 13:00	10/19/16 00:34	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		10/10/16 13:00	10/19/16 00:34	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/10/16 13:00	10/19/16 00:34	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.1		0.25	0.11	mg/L		10/10/16 13:00	10/24/16 17:29	25
Calcium	140		1.3	0.63	mg/L		10/10/16 13:00	10/24/16 17:29	25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.0027		0.0025	0.00034	mg/L		10/10/16 13:00	10/24/16 17:11	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/10/16 13:00	10/24/16 17:11	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		10/10/16 10:59	10/14/16 13:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	640		5.0	3.4	mg/L			10/04/16 15:59	1

Client Sample Results

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

TestAmerica Job ID: 400-128049-1
SDG: AP

Client Sample ID: MGWC-12

Lab Sample ID: 400-128049-3

Date Collected: 09/29/16 08:24

Matrix: Water

Date Received: 10/01/16 08:57

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			10/15/16 16:17	1
Fluoride	0.26		0.20	0.082	mg/L			10/15/16 16:17	1
Sulfate	<0.70		1.0	0.70	mg/L			10/15/16 16:17	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		10/10/16 13:00	10/19/16 00:38	5
Arsenic	0.0019		0.0013	0.00046	mg/L		10/10/16 13:00	10/19/16 00:38	5
Barium	0.052		0.0025	0.00049	mg/L		10/10/16 13:00	10/19/16 00:38	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:00	10/19/16 00:38	5
Calcium	30		0.25	0.13	mg/L		10/10/16 13:00	10/19/16 00:38	5
Chromium	<0.0011		0.0025	0.0011	mg/L		10/10/16 13:00	10/19/16 00:38	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		10/10/16 13:00	10/19/16 00:38	5
Lead	<0.00035		0.0013	0.00035	mg/L		10/10/16 13:00	10/19/16 00:38	5
Lithium	0.017		0.0050	0.0032	mg/L		10/10/16 13:00	10/19/16 00:38	5
Molybdenum	0.0014	J	0.015	0.00085	mg/L		10/10/16 13:00	10/19/16 00:38	5
Selenium	<0.00024		0.0013	0.00024	mg/L		10/10/16 13:00	10/19/16 00:38	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		10/10/16 13:00	10/24/16 17:34	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:00	10/24/16 17:34	5
Thallium	<0.000085		0.00050	0.000085	mg/L		10/10/16 13:00	10/24/16 17:34	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		10/10/16 10:59	10/14/16 13:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	190		5.0	3.4	mg/L			10/04/16 15:59	1

Definitions/Glossary

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

TestAmerica Job ID: 400-128049-1
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.
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
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.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	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 McIntosh

TestAmerica Job ID: 400-128049-1
SDG: AP

Client Sample ID: MGWC-3

Date Collected: 09/29/16 08:28

Date Received: 10/01/16 08:57

Lab Sample ID: 400-128049-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	327008	10/15/16 15:08	TAJ	TAL PEN
Total/NA	Analysis	300.0		5	327182	10/17/16 20:34	TAJ	TAL PEN
Total Recoverable	Prep	3005A			326107	10/10/16 13:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	327233	10/19/16 00:29	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		326107	10/10/16 13:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	328072	10/24/16 17:07	AJR	TAL PEN
Total/NA	Prep	7470A			326078	10/10/16 10:59	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326820	10/14/16 13:03	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	325304	10/04/16 15:59	JLB	TAL PEN

Client Sample ID: MGWC-2

Date Collected: 09/29/16 08:49

Date Received: 10/01/16 08:57

Lab Sample ID: 400-128049-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	327008	10/15/16 15:54	TAJ	TAL PEN
Total/NA	Analysis	300.0		10	327182	10/17/16 20:57	TAJ	TAL PEN
Total Recoverable	Prep	3005A			326107	10/10/16 13:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	327233	10/19/16 00:34	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		326107	10/10/16 13:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	328072	10/24/16 17:11	AJR	TAL PEN
Total Recoverable	Prep	3005A	DL		326107	10/10/16 13:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	DL	25	328072	10/24/16 17:29	AJR	TAL PEN
Total/NA	Prep	7470A			326078	10/10/16 10:59	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326820	10/14/16 13:05	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	325304	10/04/16 15:59	JLB	TAL PEN

Client Sample ID: MGWC-12

Date Collected: 09/29/16 08:24

Date Received: 10/01/16 08:57

Lab Sample ID: 400-128049-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	327008	10/15/16 16:17	TAJ	TAL PEN
Total Recoverable	Prep	3005A			326107	10/10/16 13:00	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	327233	10/19/16 00:38	RJB	TAL PEN
Total Recoverable	Prep	3005A	RA		326107	10/10/16 13:00	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	328072	10/24/16 17:34	AJR	TAL PEN
Total/NA	Prep	7470A			326078	10/10/16 10:59	JAP	TAL PEN
Total/NA	Analysis	7470A		1	326820	10/14/16 13:06	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	325304	10/04/16 15:59	JLB	TAL PEN

Laboratory References:

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

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-128049-1
SDG: AP

HPLC/IC

Analysis Batch: 327008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128049-1	MGWC-3	Total/NA	Water	300.0	
400-128049-2	MGWC-2	Total/NA	Water	300.0	
400-128049-3	MGWC-12	Total/NA	Water	300.0	
MB 400-327008/36	Method Blank	Total/NA	Water	300.0	
LCS 400-327008/37	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-327008/38	Lab Control Sample Dup	Total/NA	Water	300.0	
400-127895-J-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
400-128049-1 MS	MGWC-3	Total/NA	Water	300.0	

Analysis Batch: 327182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128049-1	MGWC-3	Total/NA	Water	300.0	
400-128049-2	MGWC-2	Total/NA	Water	300.0	
MB 400-327182/4	Method Blank	Total/NA	Water	300.0	
LCS 400-327182/5	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-327182/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-127895-J-9 MS	Matrix Spike	Total/NA	Water	300.0	
400-128556-E-5 MS	Matrix Spike	Total/NA	Water	300.0	
400-128556-E-5 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 326078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128049-1	MGWC-3	Total/NA	Water	7470A	
400-128049-2	MGWC-2	Total/NA	Water	7470A	
400-128049-3	MGWC-12	Total/NA	Water	7470A	
MB 400-326078/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-326078/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-128367-A-3-B MS	Matrix Spike	Total/NA	Water	7470A	
400-128367-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 326107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128049-1 - RA	MGWC-3	Total Recoverable	Water	3005A	
400-128049-1	MGWC-3	Total Recoverable	Water	3005A	
400-128049-2 - DL	MGWC-2	Total Recoverable	Water	3005A	
400-128049-2	MGWC-2	Total Recoverable	Water	3005A	
400-128049-2 - RA	MGWC-2	Total Recoverable	Water	3005A	
400-128049-3 - RA	MGWC-12	Total Recoverable	Water	3005A	
400-128049-3	MGWC-12	Total Recoverable	Water	3005A	
MB 400-326107/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
MB 400-326107/1-A ^5 - RA	Method Blank	Total Recoverable	Water	3005A	
LCS 400-326107/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 400-326107/2-A - RA	Lab Control Sample	Total Recoverable	Water	3005A	
400-128360-I-27-B MS ^5	Matrix Spike	Dissolved	Water	3005A	
400-128360-I-27-C MSD ^5	Matrix Spike Duplicate	Dissolved	Water	3005A	

QC Association Summary

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

TestAmerica Job ID: 400-128049-1
SDG: AP

Metals (Continued)

Analysis Batch: 326820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128049-1	MGWC-3	Total/NA	Water	7470A	326078
400-128049-2	MGWC-2	Total/NA	Water	7470A	326078
400-128049-3	MGWC-12	Total/NA	Water	7470A	326078
MB 400-326078/14-A	Method Blank	Total/NA	Water	7470A	326078
LCS 400-326078/15-A	Lab Control Sample	Total/NA	Water	7470A	326078
400-128367-A-3-B MS	Matrix Spike	Total/NA	Water	7470A	326078
400-128367-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	326078

Analysis Batch: 327106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-326107/1-A ^5	Method Blank	Total Recoverable	Water	6020	326107
LCS 400-326107/2-A	Lab Control Sample	Total Recoverable	Water	6020	326107
400-128360-I-27-B MS ^5	Matrix Spike	Dissolved	Water	6020	326107
400-128360-I-27-C MSD ^5	Matrix Spike Duplicate	Dissolved	Water	6020	326107

Analysis Batch: 327233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128049-1	MGWC-3	Total Recoverable	Water	6020	326107
400-128049-2	MGWC-2	Total Recoverable	Water	6020	326107
400-128049-3	MGWC-12	Total Recoverable	Water	6020	326107
MB 400-326107/1-A ^5 - RA	Method Blank	Total Recoverable	Water	6020	326107
LCS 400-326107/2-A - RA	Lab Control Sample	Total Recoverable	Water	6020	326107

Analysis Batch: 328072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128049-1 - RA	MGWC-3	Total Recoverable	Water	6020	326107
400-128049-2 - RA	MGWC-2	Total Recoverable	Water	6020	326107
400-128049-2 - DL	MGWC-2	Total Recoverable	Water	6020	326107
400-128049-3 - RA	MGWC-12	Total Recoverable	Water	6020	326107

General Chemistry

Analysis Batch: 325304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128049-1	MGWC-3	Total/NA	Water	SM 2540C	
400-128049-2	MGWC-2	Total/NA	Water	SM 2540C	
400-128049-3	MGWC-12	Total/NA	Water	SM 2540C	
MB 400-325304/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-325304/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-127984-A-2 DU	Duplicate	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-128049-1
SDG: AP

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-327008/36
Matrix: Water
Analysis Batch: 327008

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			10/15/16 08:41	1
Fluoride	<0.082		0.20	0.082	mg/L			10/15/16 08:41	1
Sulfate	<0.70		1.0	0.70	mg/L			10/15/16 08:41	1

Lab Sample ID: LCS 400-327008/37
Matrix: Water
Analysis Batch: 327008

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	9.25		mg/L		93	90 - 110
Fluoride	10.0	9.96		mg/L		100	90 - 110
Sulfate	10.0	9.47		mg/L		95	90 - 110

Lab Sample ID: LCSD 400-327008/38
Matrix: Water
Analysis Batch: 327008

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	6	15
Fluoride	10.0	10.5		mg/L		105	90 - 110	6	15
Sulfate	10.0	10.3		mg/L		103	90 - 110	8	15

Lab Sample ID: 400-127895-J-1 MSD
Matrix: Water
Analysis Batch: 327008

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	19		50.0	68.4		mg/L		98	80 - 120	0	20
Fluoride	<0.41		50.0	54.3		mg/L		109	80 - 120	1	20
Sulfate	120		50.0	170		mg/L		93	80 - 120	0	20

Lab Sample ID: 400-128049-1 MS
Matrix: Water
Analysis Batch: 327008

Client Sample ID: MGWC-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	13		10.0	23.5		mg/L		102	80 - 120
Fluoride	0.082	J	10.0	11.1		mg/L		111	80 - 120
Sulfate	90	E	10.0	99.7	E 4	mg/L		97	80 - 120

Lab Sample ID: MB 400-327182/4
Matrix: Water
Analysis Batch: 327182

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			10/17/16 12:37	1
Fluoride	<0.082		0.20	0.082	mg/L			10/17/16 12:37	1
Sulfate	<0.70		1.0	0.70	mg/L			10/17/16 12:37	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-128049-1
SDG: AP

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 400-327182/5
Matrix: Water
Analysis Batch: 327182

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	9.75		mg/L		98	90 - 110
Fluoride	10.0	10.2		mg/L		102	90 - 110
Sulfate	10.0	10.0		mg/L		100	90 - 110

Lab Sample ID: LCSD 400-327182/6
Matrix: Water
Analysis Batch: 327182

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	9.71		mg/L		97	90 - 110	0	15
Fluoride	10.0	9.32		mg/L		93	90 - 110	9	15
Sulfate	10.0	10.3		mg/L		103	90 - 110	3	15

Lab Sample ID: 400-127895-J-9 MS
Matrix: Water
Analysis Batch: 327182

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	56		500	560		mg/L		101	80 - 120
Fluoride	<4.1		500	533		mg/L		107	80 - 120
Sulfate	800		500	1320		mg/L		104	80 - 120

Lab Sample ID: 400-128556-E-5 MS
Matrix: Water
Analysis Batch: 327182

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	100	F1	50.0	139	F1	mg/L		74	80 - 120
Fluoride	<0.41		50.0	53.3		mg/L		107	80 - 120
Sulfate	9.9		50.0	60.7		mg/L		102	80 - 120

Lab Sample ID: 400-128556-E-5 MSD
Matrix: Water
Analysis Batch: 327182

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	100	F1	50.0	139	F1	mg/L		73	80 - 120	0	20
Fluoride	<0.41		50.0	52.8		mg/L		106	80 - 120	1	20
Sulfate	9.9		50.0	60.1		mg/L		100	80 - 120	1	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-326107/1-A ^5
Matrix: Water
Analysis Batch: 327106

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 326107

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		10/10/16 13:00	10/17/16 17:00	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-128049-1
SDG: AP

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

Lab Sample ID: LCS 400-326107/2-A
Matrix: Water
Analysis Batch: 327106

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 326107

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Boron	0.100	0.0955	^	mg/L		96	80 - 120

Lab Sample ID: 400-128360-I-27-B MS ^5
Matrix: Water
Analysis Batch: 327106

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 326107

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010	^	0.0500	0.0486	^	mg/L		97	75 - 125
Arsenic	0.035		0.0500	0.0879		mg/L		107	75 - 125
Barium	0.23	^	0.0500	0.280	^ 4	mg/L		100	75 - 125
Beryllium	<0.00034		0.0500	0.0487		mg/L		97	75 - 125
Boron	0.15	^	0.100	0.258		mg/L		110	75 - 125
Cadmium	<0.00034	^	0.0500	0.0477	^	mg/L		95	75 - 125
Chromium	<0.0011		0.0500	0.0511		mg/L		102	75 - 125
Cobalt	0.00059	J	0.0500	0.0553		mg/L		109	75 - 125
Lead	0.00050	J	0.0500	0.0443		mg/L		88	75 - 125
Lithium	<0.0032	^	0.0500	0.0392	^	mg/L		78	75 - 125
Molybdenum	0.0047	J	0.0500	0.0565		mg/L		104	75 - 125
Selenium	<0.00024		0.0500	0.0519		mg/L		104	75 - 125
Thallium	<0.000085	^	0.0100	0.00901	^	mg/L		90	75 - 125

Lab Sample ID: 400-128360-I-27-C MSD ^5
Matrix: Water
Analysis Batch: 327106

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 326107

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Antimony	<0.0010	^	0.0500	0.0466	^	mg/L		93	75 - 125	4	20
Arsenic	0.035		0.0500	0.0874		mg/L		106	75 - 125	1	20
Barium	0.23	^	0.0500	0.277	^ 4	mg/L		93	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0497		mg/L		99	75 - 125	2	20
Boron	0.15	^	0.100	0.257		mg/L		108	75 - 125	1	20
Cadmium	<0.00034	^	0.0500	0.0475	^	mg/L		95	75 - 125	0	20
Chromium	<0.0011		0.0500	0.0517		mg/L		103	75 - 125	1	20
Cobalt	0.00059	J	0.0500	0.0560		mg/L		111	75 - 125	1	20
Lead	0.00050	J	0.0500	0.0447		mg/L		88	75 - 125	1	20
Lithium	<0.0032	^	0.0500	0.0435	^	mg/L		87	75 - 125	10	20
Molybdenum	0.0047	J	0.0500	0.0565		mg/L		104	75 - 125	0	20
Selenium	<0.00024		0.0500	0.0518		mg/L		104	75 - 125	0	20
Thallium	<0.000085	^	0.0100	0.00908	^	mg/L		91	75 - 125	1	20

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

Lab Sample ID: MB 400-326107/1-A ^5
Matrix: Water
Analysis Batch: 327233

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 326107

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony - RA	<0.0010		0.0025	0.0010	mg/L		10/10/16 13:00	10/18/16 13:55	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-128049-1
SDG: AP

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

Lab Sample ID: MB 400-326107/1-A ^5
Matrix: Water
Analysis Batch: 327233

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 326107

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic - RA	<0.00046		0.0013	0.00046	mg/L		10/10/16 13:00	10/18/16 13:55	5
Barium - RA	<0.00049		0.0025	0.00049	mg/L		10/10/16 13:00	10/18/16 13:55	5
Beryllium - RA	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:00	10/18/16 13:55	5
Cadmium - RA	<0.00034		0.0025	0.00034	mg/L		10/10/16 13:00	10/18/16 13:55	5
Calcium - RA	<0.13		0.25	0.13	mg/L		10/10/16 13:00	10/18/16 13:55	5
Chromium - RA	<0.0011		0.0025	0.0011	mg/L		10/10/16 13:00	10/18/16 13:55	5
Cobalt - RA	<0.00040		0.0025	0.00040	mg/L		10/10/16 13:00	10/18/16 13:55	5
Lead - RA	<0.00035		0.0013	0.00035	mg/L		10/10/16 13:00	10/18/16 13:55	5
Lithium - RA	<0.0032		0.0050	0.0032	mg/L		10/10/16 13:00	10/18/16 13:55	5
Molybdenum - RA	<0.00085		0.015	0.00085	mg/L		10/10/16 13:00	10/18/16 13:55	5
Selenium - RA	<0.00024		0.0013	0.00024	mg/L		10/10/16 13:00	10/18/16 13:55	5
Thallium - RA	<0.000085		0.00050	0.000085	mg/L		10/10/16 13:00	10/18/16 13:55	5

Lab Sample ID: LCS 400-326107/2-A
Matrix: Water
Analysis Batch: 327233

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 326107

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony - RA	0.0500	0.0519		mg/L		104	80 - 120
Arsenic - RA	0.0500	0.0512		mg/L		102	80 - 120
Barium - RA	0.0500	0.0447		mg/L		89	80 - 120
Beryllium - RA	0.0500	0.0492		mg/L		98	80 - 120
Cadmium - RA	0.0500	0.0487		mg/L		97	80 - 120
Calcium - RA	5.00	5.02		mg/L		100	80 - 120
Chromium - RA	0.0500	0.0496		mg/L		99	80 - 120
Cobalt - RA	0.0500	0.0471		mg/L		94	80 - 120
Lead - RA	0.0500	0.0542		mg/L		108	80 - 120
Lithium - RA	0.0500	0.0492		mg/L		98	80 - 120
Molybdenum - RA	0.0500	0.0485		mg/L		97	80 - 120
Selenium - RA	0.0500	0.0502		mg/L		100	80 - 120
Thallium - RA	0.0100	0.00997		mg/L		100	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-326078/14-A
Matrix: Water
Analysis Batch: 326820

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 326078

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		10/10/16 10:59	10/14/16 12:45	1

Lab Sample ID: LCS 400-326078/15-A
Matrix: Water
Analysis Batch: 326820

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 326078

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.00105		mg/L		104	80 - 120

QC Sample Results

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

TestAmerica Job ID: 400-128049-1
 SDG: AP

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 400-128367-A-3-B MS
Matrix: Water
Analysis Batch: 326820

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 326078

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070	F1	0.00201	0.00160	F1	mg/L		79	80 - 120

Lab Sample ID: 400-128367-A-3-C MSD
Matrix: Water
Analysis Batch: 326820

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 326078

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070	F1	0.00201	0.00160		mg/L		80	80 - 120	0	20

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

Lab Sample ID: MB 400-325304/1
Matrix: Water
Analysis Batch: 325304

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			10/04/16 15:59	1

Lab Sample ID: LCS 400-325304/2
Matrix: Water
Analysis Batch: 325304

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	270		mg/L		92	78 - 122

Lab Sample ID: 400-127984-A-2 DU
Matrix: Water
Analysis Batch: 325304

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	10		10.0		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
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Client Information Client Contact: J. Abraham Phone: 878-486-2700 Southern Company		Lab PM: Whitmore, Cheyenne R E-Mail: cheyenne.whitmore@testamericainc.com		Carrier Tracking No(s): Page: 1 of 1 Job #:	
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 McIntosh Site: AP		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 - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsH2O2 P - Na2O4S Q - Na2SO3 R - Na2SO4 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, SW=slurry, A=air) Preservation Code		TDS - SM 2540C : Cl.F.S04 - EPA 300 Metals Appendix III & IV - EPA 6020 & EPA 7470 Radium 226 & 228 - SW-846 9315 & 9320		Special Instructions/Note: 400-128049 COC	
M G W C - 3 M G W C - 2 M G W C - 12		9/29/16 0828 9/29/16 0849 9/29/16 0824		W W W W W W W W W	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Empty Kit Relinquished by: Will V. J.		Relinquished by: [Signature]		Relinquished by: [Signature]	
Date/Time: 9/30/16 09:22 Date/Time: 9/30/16 09:34		Date/Time: 9/30/16 09:22 Date/Time: 9/30/16 09:34		Date/Time: 9/30/16 09:22 Date/Time: 9/30/16 09:34	
Company: ERN Company: ERN Company: ERN		Company: ERN Company: ERN Company: ERN		Company: ERN Company: ERN Company: ERN	
Custody Seal No. A: Yes A. No.		Custody Seal No.		Custody Seal No.	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-128049-1

SDG Number: AP

Login Number: 128049

List Number: 1

Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	745515
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 McIntosh

TestAmerica Job ID: 400-128049-1
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
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.

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-128049-2

TestAmerica Sample Delivery Group: AP

Client Project/Site: CCR - Plant McIntosh

For:

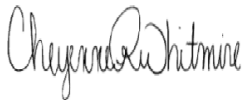
Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

10/31/2016 10:46:00 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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

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

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

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Method Summary

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

TestAmerica Job ID: 400-128049-2
SDG: AP

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 McIntosh

TestAmerica Job ID: 400-128049-2
SDG: AP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-128049-1	MGWC-3	Water	09/29/16 08:28	10/01/16 08:57
400-128049-2	MGWC-2	Water	09/29/16 08:49	10/01/16 08:57
400-128049-3	MGWC-12	Water	09/29/16 08:24	10/01/16 08:57

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Client Sample Results

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

TestAmerica Job ID: 400-128049-2
 SDG: AP

Client Sample ID: MGWC-3

Lab Sample ID: 400-128049-1

Date Collected: 09/29/16 08:28

Matrix: Water

Date Received: 10/01/16 08:57

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.990		0.212	0.230	1.00	0.161	pCi/L	10/05/16 14:54	10/27/16 14:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					10/05/16 14:54	10/27/16 14:53	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.439		0.270	0.273	1.00	0.413	pCi/L	10/05/16 15:26	10/26/16 15:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					10/05/16 15:26	10/26/16 15:05	1
Y Carrier	84.5		40 - 110					10/05/16 15:26	10/26/16 15:05	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	1.43		0.344	0.357	5.00	0.413	pCi/L		10/31/16 08:56	1

Client Sample Results

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

TestAmerica Job ID: 400-128049-2
 SDG: AP

Client Sample ID: MGWC-2

Lab Sample ID: 400-128049-2

Date Collected: 09/29/16 08:49

Matrix: Water

Date Received: 10/01/16 08:57

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.204	U	0.153	0.154	1.00	0.233	pCi/L	10/05/16 14:54	10/27/16 19:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					10/05/16 14:54	10/27/16 19:43	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.461		0.292	0.295	1.00	0.446	pCi/L	10/05/16 15:26	10/26/16 15:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					10/05/16 15:26	10/26/16 15:05	1
Y Carrier	80.4		40 - 110					10/05/16 15:26	10/26/16 15:05	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	0.665		0.329	0.333	5.00	0.446	pCi/L		10/31/16 08:56	1

Client Sample Results

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

TestAmerica Job ID: 400-128049-2
 SDG: AP

Client Sample ID: MGWC-12

Lab Sample ID: 400-128049-3

Date Collected: 09/29/16 08:24

Matrix: Water

Date Received: 10/01/16 08:57

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		0.163	0.166	1.00	0.209	pCi/L	10/05/16 14:54	10/27/16 19:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					10/05/16 14:54	10/27/16 19:44	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.731		0.371	0.377	1.00	0.559	pCi/L	10/05/16 15:26	10/26/16 15:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					10/05/16 15:26	10/26/16 15:05	1
Y Carrier	80.7		40 - 110					10/05/16 15:26	10/26/16 15:05	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	1.11		0.405	0.412	5.00	0.559	pCi/L		10/31/16 08:56	1

Definitions/Glossary

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

TestAmerica Job ID: 400-128049-2
SDG: AP

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 McIntosh

TestAmerica Job ID: 400-128049-2
SDG: AP

Client Sample ID: MGWC-3

Date Collected: 09/29/16 08:28

Date Received: 10/01/16 08:57

Lab Sample ID: 400-128049-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			273325	10/05/16 14:54	MCJ	TAL SL
Total/NA	Analysis	9315		1	276220	10/27/16 14:53	RTM	TAL SL
Total/NA	Prep	PrecSep_0			273330	10/05/16 15:26	MCJ	TAL SL
Total/NA	Analysis	9320		1	276037	10/26/16 15:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	276812	10/31/16 08:56	RTM	TAL SL

Client Sample ID: MGWC-2

Date Collected: 09/29/16 08:49

Date Received: 10/01/16 08:57

Lab Sample ID: 400-128049-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			273325	10/05/16 14:54	MCJ	TAL SL
Total/NA	Analysis	9315		1	276218	10/27/16 19:43	RTM	TAL SL
Total/NA	Prep	PrecSep_0			273330	10/05/16 15:26	MCJ	TAL SL
Total/NA	Analysis	9320		1	276037	10/26/16 15:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	276812	10/31/16 08:56	RTM	TAL SL

Client Sample ID: MGWC-12

Date Collected: 09/29/16 08:24

Date Received: 10/01/16 08:57

Lab Sample ID: 400-128049-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			273325	10/05/16 14:54	MCJ	TAL SL
Total/NA	Analysis	9315		1	276218	10/27/16 19:44	RTM	TAL SL
Total/NA	Prep	PrecSep_0			273330	10/05/16 15:26	MCJ	TAL SL
Total/NA	Analysis	9320		1	276037	10/26/16 15:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	276812	10/31/16 08:56	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 McIntosh

TestAmerica Job ID: 400-128049-2
SDG: AP

Rad

Prep Batch: 273325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128049-1	MGWC-3	Total/NA	Water	PrecSep-21	
400-128049-2	MGWC-2	Total/NA	Water	PrecSep-21	
400-128049-3	MGWC-12	Total/NA	Water	PrecSep-21	
MB 160-273325/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-273325/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
160-19227-A-3-C DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 273330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128049-1	MGWC-3	Total/NA	Water	PrecSep_0	
400-128049-2	MGWC-2	Total/NA	Water	PrecSep_0	
400-128049-3	MGWC-12	Total/NA	Water	PrecSep_0	
MB 160-273330/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-273330/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
160-19227-A-3-E DU	Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-128049-2
 SDG: AP

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-273325/1-A
Matrix: Water
Analysis Batch: 276295

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 273325

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1334	U	0.150	0.151	1.00	0.246	pCi/L	10/05/16 14:54	10/27/16 10:38	1
Carrier	%Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					10/05/16 14:54	10/27/16 10:38	1

Lab Sample ID: LCS 160-273325/2-A
Matrix: Water
Analysis Batch: 276295

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 273325

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.1	13.49		1.43	1.00	0.177	pCi/L	122	68 - 137
Carrier	%Yield	LCS Qualifier	Limits						
Ba Carrier	91.7		40 - 110						

Lab Sample ID: 160-19227-A-3-C DU
Matrix: Water
Analysis Batch: 276295

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 273325

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.425		0.4279		0.248	1.00	0.321	pCi/L	0.01	1
Carrier	%Yield	DU Qualifier	Limits							
Ba Carrier	88.0		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-273330/1-A
Matrix: Water
Analysis Batch: 276037

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 273330

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.7717		0.321	0.329	1.00	0.456	pCi/L	10/05/16 15:26	10/26/16 15:03	1
Carrier	%Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.6		40 - 110					10/05/16 15:26	10/26/16 15:03	1
Y Carrier	82.2		40 - 110					10/05/16 15:26	10/26/16 15:03	1

QC Sample Results

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

TestAmerica Job ID: 400-128049-2
 SDG: AP

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

Lab Sample ID: LCS 160-273330/2-A
Matrix: Water
Analysis Batch: 276037

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 273330

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.4	15.83		1.71	1.00	0.389	pCi/L	110	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	91.7		40 - 110
Y Carrier	82.2		40 - 110

Lab Sample ID: 160-19227-A-3-E DU
Matrix: Water
Analysis Batch: 276037

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 273330

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.797	U	1.392		0.584	1.00	0.787	pCi/L	0.52	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	88.0		40 - 110
Y Carrier	83.0		40 - 110

TestAmerica Pensacola
 3355 McLemore Drive
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2571

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information Client Contact: Jett Abraham 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 McIntosh Site: AP		Lab PM: Whitmore, Cheyenne R E-Mail: cheyenne.whitmore@testamericainc.com Carrier Tracking No(s): Page: 1 of 1 Job #:	
Analysis Requested Due Date Requested: TAT Requested (days): FO #: 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 - AsNGO2 P - Na2OAS Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Sample Identification Sample ID: M6WC-3 M6WC-2 M6WC-12		Field Filtered Sample (Yes or No): Matrix (W=water, S=solid, O=oil, G=grab, S=Slurry, A=Air) Sample Type (C=comp, G=grab) Sample Time: 9/29/16 0828 9/29/16 0849 9/29/16 0824 Preservation Code: W W W W W W W W W W	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/Note: Radium 226 & 228 - SW-046 9315 & 9320 Metals Appendix III & IV - EPA 6020 & EPA 7470 TDS - SM 2540C : Cl.F.S04 - EPA 300	
Sample Disposal (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 <input type="checkbox"/> Archive For Months		Special Instructions/QC Requirements: Please also provide results to Maria Padilla and Heath McCorkle	
Empty Kit Relinquished by: Relinquished by: [Signature] Date/Time: 9/30/16 09:22 Relinquished by: [Signature] Date/Time: 9/30/16 09:34 Relinquished by: [Signature]		Method of Shipment: Date/Time: 9/30/16 09:22 Date/Time: 9/30/16 0857 Date/Time:	
Custody Seals Intact: A. Yes <input type="checkbox"/> No <input type="checkbox"/>		Cooler Temperature(s): Other Remarks:	

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-128049-2

SDG Number: AP

Login Number: 128049

List Number: 1

Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	745515
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 McIntosh

TestAmerica Job ID: 400-128049-2
 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
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 McIntosh

TestAmerica Job ID: 400-128049-2
SDG: AP

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: 400-130328-1

TestAmerica Sample Delivery Group: AP

Client Project/Site: CCR - Plant McIntosh

For:

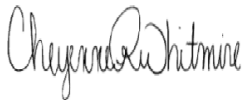
Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

12/7/2016 1:09:14 PM

Cheyenne Whitmire, Project Manager II

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

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

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

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Case Narrative

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

TestAmerica Job ID: 400-130328-1
SDG: AP

Job ID: 400-130328-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-130328-1

HPLC/IC

Method(s) 300.0: The matrix spike duplicate (MSD) recoveries for analytical batch 333094 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) 300.0: The following samples were diluted due to high conductivity: MGWC-7 (400-130328-6), MGWC-8 (400-130328-7), MGWC-1 (400-130328-8), MGWC-3 (400-130328-9), MGWC-2 (400-130328-10), DUP-1 (400-130328-12), (400-130328-A-6 MS) and (400-130328-A-6 MSD). Elevated reporting limits (RL) are provided.

Metals

Method(s) 6020: The method blank for preparation batch 331915 and analytical batch 332046 contained Arsenic and 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 following sample was diluted to bring the concentration of target analytes within the calibration range: MGWC-2 (400-130328-10). Elevated reporting limits (RLs) are provided.

Method(s) 6020: The native sample, post-digestion spike (PDS), matrix spike, and matrix spike duplicate (MS/MSD) associated with preparation batch 331915 and analytical batch 332046 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of Boron and Calcium in the PDS/MS/MSD was above the instrument calibration range. The data have been reported and qualified.

Method(s) 7470A: The method blank for prep batch 332741 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 McIntosh

TestAmerica Job ID: 400-130328-1
 SDG: AP

Client Sample ID: MGWA-10

Lab Sample ID: 400-130328-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.5		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	1.7		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.027		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	5.2		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0026		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0081		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	140		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWA-11

Lab Sample ID: 400-130328-3

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	0.12	J	0.20	0.082	mg/L	1		300.0	Total/NA
Arsenic	0.0013	B	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.11		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	33		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.021		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	270		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWA-5

Lab Sample ID: 400-130328-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.1		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.093	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	6.7		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	26		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0094		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	250		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWA-6

Lab Sample ID: 400-130328-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.084	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	0.020	B	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.052		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.17		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 McIntosh

TestAmerica Job ID: 400-130328-1
SDG: AP

Client Sample ID: MGWA-6 (Continued)

Lab Sample ID: 400-130328-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	98		0.25	0.13	mg/L	5		6020	Total
Total Dissolved Solids	340		5.0	3.4	mg/L	1		SM 2540C	Recoverable Total/NA

Client Sample ID: MGWC-7

Lab Sample ID: 400-130328-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		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	170	F1	5.0	3.5	mg/L	5		300.0	Total/NA
Barium	0.013		0.0025	0.00049	mg/L	5		6020	Total
Boron	1.3		0.050	0.021	mg/L	5		6020	Recoverable Total
Calcium	50		0.25	0.13	mg/L	5		6020	Recoverable Total
Cobalt	0.0094		0.0025	0.00040	mg/L	5		6020	Recoverable Total
Lithium	0.13		0.0050	0.0032	mg/L	5		6020	Recoverable Total
Mercury	0.000080	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: MGWC-8

Lab Sample ID: 400-130328-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.5		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
Sulfate	130		5.0	3.5	mg/L	5		300.0	Total/NA
Barium	0.034		0.0025	0.00049	mg/L	5		6020	Total
Beryllium	0.00040	J	0.0025	0.00034	mg/L	5		6020	Recoverable Total
Boron	0.98		0.050	0.021	mg/L	5		6020	Recoverable Total
Calcium	27		0.25	0.13	mg/L	5		6020	Recoverable Total
Cobalt	0.0040		0.0025	0.00040	mg/L	5		6020	Recoverable Total
Lithium	0.031		0.0050	0.0032	mg/L	5		6020	Recoverable Total
Thallium	0.000090	J	0.00050	0.000085	mg/L	5		6020	Recoverable Total
Mercury	0.00021	B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	290		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-1

Lab Sample ID: 400-130328-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14		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	130		5.0	3.5	mg/L	5		300.0	Total/NA
Arsenic	0.0030	B	0.0013	0.00046	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 McIntosh

TestAmerica Job ID: 400-130328-1
SDG: AP

Client Sample ID: MGWC-1 (Continued)

Lab Sample ID: 400-130328-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.096		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.88		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	83		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.013		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	410		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-3

Lab Sample ID: 400-130328-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14		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	97		5.0	3.5	mg/L	5		300.0	Total/NA
Arsenic	0.0014	B	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.14		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.2		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	94		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00041	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	0.000070	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	420		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-2

Lab Sample ID: 400-130328-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	20		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	280		10	7.0	mg/L	10		300.0	Total/NA
Arsenic	0.00068	J B	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.056		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.0022	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	120		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0032		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0058		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Boron - DL	3.9		0.25	0.11	mg/L	25		6020	Total Recoverable
Mercury	0.00010	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	680		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-12

Lab Sample ID: 400-130328-11

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-130328-1
SDG: AP

Client Sample ID: MGWC-12 (Continued)

Lab Sample ID: 400-130328-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.5		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	3.0		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.0017	B	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.044		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.055		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	26		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.016		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Mercury	0.000086	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	240		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-1

Lab Sample ID: 400-130328-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		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	170		5.0	3.5	mg/L	5		300.0	Total/NA
Arsenic	0.00094	J B	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.014		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.3		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	50		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0098		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.13		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	370		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-1

Lab Sample ID: 400-130328-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.026	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Mercury	0.000078	J B	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	20		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FERB-1

Lab Sample ID: 400-130328-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.000086	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

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

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

TestAmerica Job ID: 400-130328-1
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 McIntosh

TestAmerica Job ID: 400-130328-1
SDG: AP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-130328-1	MGWA-10	Water	11/16/16 08:55	11/18/16 08:33
400-130328-3	MGWA-11	Water	11/16/16 10:30	11/18/16 08:33
400-130328-4	MGWA-5	Water	11/16/16 10:45	11/18/16 08:33
400-130328-5	MGWA-6	Water	11/16/16 10:30	11/18/16 08:33
400-130328-6	MGWC-7	Water	11/16/16 11:50	11/18/16 08:33
400-130328-7	MGWC-8	Water	11/16/16 11:53	11/18/16 08:33
400-130328-8	MGWC-1	Water	11/16/16 13:27	11/18/16 08:33
400-130328-9	MGWC-3	Water	11/16/16 12:05	11/18/16 08:33
400-130328-10	MGWC-2	Water	11/16/16 12:15	11/18/16 08:33
400-130328-11	MGWC-12	Water	11/16/16 13:35	11/18/16 08:33
400-130328-12	DUP-1	Water	11/16/16 00:00	11/18/16 08:33
400-130328-13	FB-1	Water	11/16/16 13:20	11/18/16 08:33
400-130328-14	FERB-1	Water	11/16/16 13:25	11/18/16 08:33

Client Sample Results

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

TestAmerica Job ID: 400-130328-1
SDG: AP

Client Sample ID: MGWA-10

Date Collected: 11/16/16 08:55

Date Received: 11/18/16 08:33

Lab Sample ID: 400-130328-1

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.5		1.0	0.89	mg/L			11/24/16 02:52	1
Fluoride	<0.082		0.20	0.082	mg/L			11/24/16 02:52	1
Sulfate	1.7		1.0	0.70	mg/L			11/24/16 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		11/21/16 09:23	11/21/16 19:48	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 09:23	11/21/16 19:48	5
Barium	0.027		0.0025	0.00049	mg/L		11/21/16 09:23	11/21/16 19:48	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 19:48	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 09:23	11/21/16 19:48	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 19:48	5
Calcium	5.2		0.25	0.13	mg/L		11/21/16 09:23	11/21/16 19:48	5
Chromium	0.0026		0.0025	0.0011	mg/L		11/21/16 09:23	11/21/16 19:48	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/21/16 09:23	11/21/16 19:48	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 09:23	11/21/16 19:48	5
Lithium	0.0081		0.0050	0.0032	mg/L		11/21/16 09:23	11/21/16 19:48	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 09:23	11/21/16 19:48	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 09:23	11/21/16 19:48	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 09:23	11/21/16 19:48	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/28/16 09:32	11/30/16 12:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	140		5.0	3.4	mg/L			11/22/16 19:16	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-1
 SDG: AP

Client Sample ID: MGWA-11

Date Collected: 11/16/16 10:30

Date Received: 11/18/16 08:33

Lab Sample ID: 400-130328-3

Matrix: Water

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			11/24/16 03:15	1
Fluoride	0.12	J	0.20	0.082	mg/L			11/24/16 03:15	1
Sulfate	<0.70		1.0	0.70	mg/L			11/24/16 03:15	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		11/21/16 09:23	11/21/16 19:52	5
Arsenic	0.0013	B	0.0013	0.00046	mg/L		11/21/16 09:23	11/21/16 19:52	5
Barium	0.11		0.0025	0.00049	mg/L		11/21/16 09:23	11/21/16 19:52	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 19:52	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 09:23	11/21/16 19:52	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 19:52	5
Calcium	33		0.25	0.13	mg/L		11/21/16 09:23	11/21/16 19:52	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 09:23	11/21/16 19:52	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/21/16 09:23	11/21/16 19:52	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 09:23	11/21/16 19:52	5
Lithium	0.021		0.0050	0.0032	mg/L		11/21/16 09:23	11/21/16 19:52	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 09:23	11/21/16 19:52	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 09:23	11/21/16 19:52	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 09:23	11/21/16 19:52	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/28/16 09:32	11/30/16 12:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	270		5.0	3.4	mg/L			11/22/16 19:16	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-1
 SDG: AP

Client Sample ID: MGWA-5

Lab Sample ID: 400-130328-4

Date Collected: 11/16/16 10:45

Matrix: Water

Date Received: 11/18/16 08:33

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.1		1.0	0.89	mg/L			11/25/16 17:49	1
Fluoride	0.093	J	0.20	0.082	mg/L			11/25/16 17:49	1
Sulfate	6.7		1.0	0.70	mg/L			11/25/16 17:49	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		11/21/16 09:23	11/21/16 19:57	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 09:23	11/21/16 19:57	5
Barium	0.035		0.0025	0.00049	mg/L		11/21/16 09:23	11/21/16 19:57	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 19:57	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 09:23	11/21/16 19:57	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 19:57	5
Calcium	26		0.25	0.13	mg/L		11/21/16 09:23	11/21/16 19:57	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 09:23	11/21/16 19:57	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/21/16 09:23	11/21/16 19:57	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 09:23	11/21/16 19:57	5
Lithium	0.0094		0.0050	0.0032	mg/L		11/21/16 09:23	11/21/16 19:57	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 09:23	11/21/16 19:57	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 09:23	11/21/16 19:57	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 09:23	11/21/16 19:57	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		11/28/16 09:32	11/30/16 12:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	250		5.0	3.4	mg/L			11/22/16 19:16	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-1
 SDG: AP

Client Sample ID: MGWA-6

Lab Sample ID: 400-130328-5

Date Collected: 11/16/16 10:30

Matrix: Water

Date Received: 11/18/16 08:33

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10		1.0	0.89	mg/L			11/25/16 18:12	1
Fluoride	0.084	J	0.20	0.082	mg/L			11/25/16 18:12	1
Sulfate	20		1.0	0.70	mg/L			11/25/16 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		11/21/16 09:23	11/21/16 20:01	5
Arsenic	0.020	B	0.0013	0.00046	mg/L		11/21/16 09:23	11/21/16 20:01	5
Barium	0.052		0.0025	0.00049	mg/L		11/21/16 09:23	11/21/16 20:01	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 20:01	5
Boron	0.17		0.050	0.021	mg/L		11/21/16 09:23	11/21/16 20:01	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 20:01	5
Calcium	98		0.25	0.13	mg/L		11/21/16 09:23	11/21/16 20:01	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 09:23	11/21/16 20:01	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/21/16 09:23	11/21/16 20:01	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 09:23	11/21/16 20:01	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 09:23	11/21/16 20:01	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 09:23	11/21/16 20:01	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 09:23	11/21/16 20:01	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 09:23	11/21/16 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		11/28/16 09:32	11/30/16 12:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	340		5.0	3.4	mg/L			11/22/16 19:16	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-1
SDG: AP

Client Sample ID: MGWC-7

Lab Sample ID: 400-130328-6

Date Collected: 11/16/16 11:50

Matrix: Water

Date Received: 11/18/16 08:33

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		1.0	0.89	mg/L			11/25/16 18:58	1
Fluoride	0.36		0.20	0.082	mg/L			11/25/16 18:58	1
Sulfate	170	F1	5.0	3.5	mg/L			11/29/16 23:49	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		11/21/16 09:23	11/21/16 20:06	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 09:23	11/21/16 20:06	5
Barium	0.013		0.0025	0.00049	mg/L		11/21/16 09:23	11/21/16 20:06	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 20:06	5
Boron	1.3		0.050	0.021	mg/L		11/21/16 09:23	11/21/16 20:06	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 20:06	5
Calcium	50		0.25	0.13	mg/L		11/21/16 09:23	11/21/16 20:06	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 09:23	11/21/16 20:06	5
Cobalt	0.0094		0.0025	0.00040	mg/L		11/21/16 09:23	11/21/16 20:06	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 09:23	11/21/16 20:06	5
Lithium	0.13		0.0050	0.0032	mg/L		11/21/16 09:23	11/21/16 20:06	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 09:23	11/21/16 20:06	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 09:23	11/21/16 20:06	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 09:23	11/21/16 20:06	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000080	J B	0.00020	0.000070	mg/L		11/28/16 09:32	11/30/16 12:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	330		5.0	3.4	mg/L			11/22/16 19:16	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-1
SDG: AP

Client Sample ID: MGWC-8

Lab Sample ID: 400-130328-7

Date Collected: 11/16/16 11:53

Matrix: Water

Date Received: 11/18/16 08:33

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.5		1.0	0.89	mg/L			11/25/16 19:21	1
Fluoride	0.091	J	0.20	0.082	mg/L			11/25/16 19:21	1
Sulfate	130		5.0	3.5	mg/L			11/30/16 00:58	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 09:23	11/21/16 20:10	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 09:23	11/21/16 20:10	5
Barium	0.034		0.0025	0.00049	mg/L		11/21/16 09:23	11/21/16 20:10	5
Beryllium	0.00040	J	0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 20:10	5
Boron	0.98		0.050	0.021	mg/L		11/21/16 09:23	11/21/16 20:10	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 20:10	5
Calcium	27		0.25	0.13	mg/L		11/21/16 09:23	11/21/16 20:10	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 09:23	11/21/16 20:10	5
Cobalt	0.0040		0.0025	0.00040	mg/L		11/21/16 09:23	11/21/16 20:10	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 09:23	11/21/16 20:10	5
Lithium	0.031		0.0050	0.0032	mg/L		11/21/16 09:23	11/21/16 20:10	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 09:23	11/21/16 20:10	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 09:23	11/21/16 20:10	5
Thallium	0.000090	J	0.00050	0.000085	mg/L		11/21/16 09:23	11/21/16 20:10	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00021	B	0.00020	0.000070	mg/L		11/28/16 09:32	11/30/16 12:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	290		5.0	3.4	mg/L			11/22/16 19:16	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-1
SDG: AP

Client Sample ID: MGWC-1

Date Collected: 11/16/16 13:27

Date Received: 11/18/16 08:33

Lab Sample ID: 400-130328-8

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14		1.0	0.89	mg/L			11/25/16 19:43	1
Fluoride	0.24		0.20	0.082	mg/L			11/25/16 19:43	1
Sulfate	130		5.0	3.5	mg/L			11/30/16 01:21	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 09:23	11/21/16 20:15	5
Arsenic	0.0030	B	0.0013	0.00046	mg/L		11/21/16 09:23	11/21/16 20:15	5
Barium	0.096		0.0025	0.00049	mg/L		11/21/16 09:23	11/21/16 20:15	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 20:15	5
Boron	0.88		0.050	0.021	mg/L		11/21/16 09:23	11/21/16 20:15	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 20:15	5
Calcium	83		0.25	0.13	mg/L		11/21/16 09:23	11/21/16 20:15	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 09:23	11/21/16 20:15	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/21/16 09:23	11/21/16 20:15	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 09:23	11/21/16 20:15	5
Lithium	0.013		0.0050	0.0032	mg/L		11/21/16 09:23	11/21/16 20:15	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 09:23	11/21/16 20:15	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 09:23	11/21/16 20:15	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 09:23	11/21/16 20:15	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		11/28/16 09:32	11/30/16 12:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	410		5.0	3.4	mg/L			11/22/16 19:16	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-1
SDG: AP

Client Sample ID: MGWC-3

Lab Sample ID: 400-130328-9

Date Collected: 11/16/16 12:05

Matrix: Water

Date Received: 11/18/16 08:33

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14		1.0	0.89	mg/L			11/25/16 20:52	1
Fluoride	0.087	J	0.20	0.082	mg/L			11/25/16 20:52	1
Sulfate	97		5.0	3.5	mg/L			11/30/16 01:44	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 09:23	11/21/16 20:19	5
Arsenic	0.0014	B	0.0013	0.00046	mg/L		11/21/16 09:23	11/21/16 20:19	5
Barium	0.14		0.0025	0.00049	mg/L		11/21/16 09:23	11/21/16 20:19	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 20:19	5
Boron	1.2		0.050	0.021	mg/L		11/21/16 09:23	11/21/16 20:19	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 20:19	5
Calcium	94		0.25	0.13	mg/L		11/21/16 09:23	11/21/16 20:19	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 09:23	11/21/16 20:19	5
Cobalt	0.00041	J	0.0025	0.00040	mg/L		11/21/16 09:23	11/21/16 20:19	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 09:23	11/21/16 20:19	5
Lithium	0.014		0.0050	0.0032	mg/L		11/21/16 09:23	11/21/16 20:19	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 09:23	11/21/16 20:19	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 09:23	11/21/16 20:19	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 09:23	11/21/16 20:19	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000070	J B	0.00020	0.000070	mg/L		11/28/16 09:32	11/30/16 12:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	420		5.0	3.4	mg/L			11/22/16 19:16	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-1
SDG: AP

Client Sample ID: MGWC-2

Lab Sample ID: 400-130328-10

Date Collected: 11/16/16 12:15

Matrix: Water

Date Received: 11/18/16 08:33

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20		1.0	0.89	mg/L			11/25/16 21:15	1
Fluoride	<0.082		0.20	0.082	mg/L			11/25/16 21:15	1
Sulfate	280		10	7.0	mg/L			11/30/16 02:07	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		11/21/16 09:23	11/21/16 20:51	5
Arsenic	0.00068	J B	0.0013	0.00046	mg/L		11/21/16 09:23	11/21/16 20:51	5
Barium	0.056		0.0025	0.00049	mg/L		11/21/16 09:23	11/21/16 20:51	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 20:51	5
Cadmium	0.0022	J	0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 20:51	5
Calcium	120		0.25	0.13	mg/L		11/21/16 09:23	11/21/16 20:51	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 09:23	11/21/16 20:51	5
Cobalt	0.0032		0.0025	0.00040	mg/L		11/21/16 09:23	11/21/16 20:51	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 09:23	11/21/16 20:51	5
Lithium	0.0058		0.0050	0.0032	mg/L		11/21/16 09:23	11/21/16 20:51	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 09:23	11/21/16 20:51	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 09:23	11/21/16 20:51	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 09:23	11/21/16 20:51	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.9		0.25	0.11	mg/L		11/21/16 09:23	11/21/16 20:55	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00010	J B	0.00020	0.000070	mg/L		11/28/16 09:32	11/30/16 13:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	680		5.0	3.4	mg/L			11/22/16 19:16	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-1
SDG: AP

Client Sample ID: MGWC-12

Lab Sample ID: 400-130328-11

Date Collected: 11/16/16 13:35

Matrix: Water

Date Received: 11/18/16 08:33

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.5		1.0	0.89	mg/L			11/25/16 21:38	1
Fluoride	0.25		0.20	0.082	mg/L			11/25/16 21:38	1
Sulfate	3.0		1.0	0.70	mg/L			11/30/16 03:15	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		11/21/16 09:23	11/21/16 21:00	5
Arsenic	0.0017	B	0.0013	0.00046	mg/L		11/21/16 09:23	11/21/16 21:00	5
Barium	0.044		0.0025	0.00049	mg/L		11/21/16 09:23	11/21/16 21:00	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 21:00	5
Boron	0.055		0.050	0.021	mg/L		11/21/16 09:23	11/21/16 21:00	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 21:00	5
Calcium	26		0.25	0.13	mg/L		11/21/16 09:23	11/21/16 21:00	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 09:23	11/21/16 21:00	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/21/16 09:23	11/21/16 21:00	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 09:23	11/21/16 21:00	5
Lithium	0.016		0.0050	0.0032	mg/L		11/21/16 09:23	11/21/16 21:00	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 09:23	11/21/16 21:00	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 09:23	11/21/16 21:00	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 09:23	11/21/16 21:00	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		11/28/16 09:32	11/30/16 13:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	240		5.0	3.4	mg/L			11/22/16 19:16	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-1
 SDG: AP

Client Sample ID: DUP-1

Lab Sample ID: 400-130328-12

Date Collected: 11/16/16 00:00

Matrix: Water

Date Received: 11/18/16 08:33

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		1.0	0.89	mg/L			11/25/16 22:00	1
Fluoride	0.37		0.20	0.082	mg/L			11/25/16 22:00	1
Sulfate	170		5.0	3.5	mg/L			11/30/16 03:38	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		11/21/16 09:23	11/21/16 21:04	5
Arsenic	0.00094	J B	0.0013	0.00046	mg/L		11/21/16 09:23	11/21/16 21:04	5
Barium	0.014		0.0025	0.00049	mg/L		11/21/16 09:23	11/21/16 21:04	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 21:04	5
Boron	1.3		0.050	0.021	mg/L		11/21/16 09:23	11/21/16 21:04	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 21:04	5
Calcium	50		0.25	0.13	mg/L		11/21/16 09:23	11/21/16 21:04	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 09:23	11/21/16 21:04	5
Cobalt	0.0098		0.0025	0.00040	mg/L		11/21/16 09:23	11/21/16 21:04	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 09:23	11/21/16 21:04	5
Lithium	0.13		0.0050	0.0032	mg/L		11/21/16 09:23	11/21/16 21:04	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 09:23	11/21/16 21:04	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 09:23	11/21/16 21:04	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 09:23	11/21/16 21:04	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		11/28/16 09:32	11/30/16 13:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	370		5.0	3.4	mg/L			11/19/16 15:37	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-1
SDG: AP

Client Sample ID: FB-1
Date Collected: 11/16/16 13:20
Date Received: 11/18/16 08:33

Lab Sample ID: 400-130328-13
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			11/25/16 22:23	1
Fluoride	<0.082		0.20	0.082	mg/L			11/25/16 22:23	1
Sulfate	<0.70		1.0	0.70	mg/L			11/30/16 04:01	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		11/21/16 09:23	11/21/16 21:09	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 09:23	11/21/16 21:09	5
Barium	<0.00049		0.0025	0.00049	mg/L		11/21/16 09:23	11/21/16 21:09	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 21:09	5
Boron	0.026	J	0.050	0.021	mg/L		11/21/16 09:23	11/21/16 21:09	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 21:09	5
Calcium	<0.13		0.25	0.13	mg/L		11/21/16 09:23	11/21/16 21:09	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 09:23	11/21/16 21:09	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/21/16 09:23	11/21/16 21:09	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 09:23	11/21/16 21:09	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 09:23	11/21/16 21:09	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 09:23	11/21/16 21:09	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 09:23	11/21/16 21:09	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 09:23	11/21/16 21:09	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		11/28/16 09:32	11/30/16 13:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	20		5.0	3.4	mg/L			11/22/16 19:16	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-1
 SDG: AP

Client Sample ID: FERB-1

Lab Sample ID: 400-130328-14

Date Collected: 11/16/16 13:25

Matrix: Water

Date Received: 11/18/16 08:33

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			11/25/16 22:46	1
Fluoride	<0.082		0.20	0.082	mg/L			11/25/16 22:46	1
Sulfate	<0.70		1.0	0.70	mg/L			11/30/16 04:23	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		11/21/16 09:23	11/21/16 21:13	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		11/21/16 09:23	11/21/16 21:13	5
Barium	<0.00049		0.0025	0.00049	mg/L		11/21/16 09:23	11/21/16 21:13	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 21:13	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 09:23	11/21/16 21:13	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 21:13	5
Calcium	<0.13		0.25	0.13	mg/L		11/21/16 09:23	11/21/16 21:13	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 09:23	11/21/16 21:13	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/21/16 09:23	11/21/16 21:13	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 09:23	11/21/16 21:13	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 09:23	11/21/16 21:13	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 09:23	11/21/16 21:13	5
Selenium	<0.00024		0.0013	0.00024	mg/L		11/21/16 09:23	11/21/16 21:13	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 09:23	11/21/16 21:13	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		11/28/16 09:32	11/30/16 13:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	36		5.0	3.4	mg/L			11/22/16 19:16	1

Definitions/Glossary

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

TestAmerica Job ID: 400-130328-1
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.
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.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Lab Chronicle

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

TestAmerica Job ID: 400-130328-1
SDG: AP

Client Sample ID: MGWA-10

Date Collected: 11/16/16 08:55

Date Received: 11/18/16 08:33

Lab Sample ID: 400-130328-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332498	11/24/16 02:52	KH1	TAL PEN
Total Recoverable	Prep	3005A			331915	11/21/16 09:23	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332046	11/21/16 19:48	AJR	TAL PEN
Total/NA	Prep	7470A			332741	11/28/16 09:32	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 12:44	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332203	11/22/16 19:16	RRC	TAL PEN

Client Sample ID: MGWA-11

Date Collected: 11/16/16 10:30

Date Received: 11/18/16 08:33

Lab Sample ID: 400-130328-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332498	11/24/16 03:15	KH1	TAL PEN
Total Recoverable	Prep	3005A			331915	11/21/16 09:23	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332046	11/21/16 19:52	AJR	TAL PEN
Total/NA	Prep	7470A			332741	11/28/16 09:32	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 12:46	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332203	11/22/16 19:16	RRC	TAL PEN

Client Sample ID: MGWA-5

Date Collected: 11/16/16 10:45

Date Received: 11/18/16 08:33

Lab Sample ID: 400-130328-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332556	11/25/16 17:49	KH1	TAL PEN
Total Recoverable	Prep	3005A			331915	11/21/16 09:23	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332046	11/21/16 19:57	AJR	TAL PEN
Total/NA	Prep	7470A			332741	11/28/16 09:32	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 12:47	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332203	11/22/16 19:16	RRC	TAL PEN

Client Sample ID: MGWA-6

Date Collected: 11/16/16 10:30

Date Received: 11/18/16 08:33

Lab Sample ID: 400-130328-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332556	11/25/16 18:12	KH1	TAL PEN
Total Recoverable	Prep	3005A			331915	11/21/16 09:23	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332046	11/21/16 20:01	AJR	TAL PEN
Total/NA	Prep	7470A			332741	11/28/16 09:32	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 12:48	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332203	11/22/16 19:16	RRC	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-130328-1
SDG: AP

Client Sample ID: MGWC-7

Lab Sample ID: 400-130328-6

Date Collected: 11/16/16 11:50

Matrix: Water

Date Received: 11/18/16 08:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332556	11/25/16 18:58	KH1	TAL PEN
Total/NA	Analysis	300.0		5	333094	11/29/16 23:49	TAJ	TAL PEN
Total Recoverable	Prep	3005A			331915	11/21/16 09:23	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332046	11/21/16 20:06	AJR	TAL PEN
Total/NA	Prep	7470A			332741	11/28/16 09:32	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 12:50	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332203	11/22/16 19:16	RRC	TAL PEN

Client Sample ID: MGWC-8

Lab Sample ID: 400-130328-7

Date Collected: 11/16/16 11:53

Matrix: Water

Date Received: 11/18/16 08:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332556	11/25/16 19:21	KH1	TAL PEN
Total/NA	Analysis	300.0		5	333094	11/30/16 00:58	TAJ	TAL PEN
Total Recoverable	Prep	3005A			331915	11/21/16 09:23	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332046	11/21/16 20:10	AJR	TAL PEN
Total/NA	Prep	7470A			332741	11/28/16 09:32	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 12:51	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332203	11/22/16 19:16	RRC	TAL PEN

Client Sample ID: MGWC-1

Lab Sample ID: 400-130328-8

Date Collected: 11/16/16 13:27

Matrix: Water

Date Received: 11/18/16 08:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332556	11/25/16 19:43	KH1	TAL PEN
Total/NA	Analysis	300.0		5	333094	11/30/16 01:21	TAJ	TAL PEN
Total Recoverable	Prep	3005A			331915	11/21/16 09:23	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332046	11/21/16 20:15	AJR	TAL PEN
Total/NA	Prep	7470A			332741	11/28/16 09:32	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 12:52	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332203	11/22/16 19:16	RRC	TAL PEN

Client Sample ID: MGWC-3

Lab Sample ID: 400-130328-9

Date Collected: 11/16/16 12:05

Matrix: Water

Date Received: 11/18/16 08:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332556	11/25/16 20:52	KH1	TAL PEN
Total/NA	Analysis	300.0		5	333094	11/30/16 01:44	TAJ	TAL PEN
Total Recoverable	Prep	3005A			331915	11/21/16 09:23	RJB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-130328-1
SDG: AP

Client Sample ID: MGWC-3

Lab Sample ID: 400-130328-9

Date Collected: 11/16/16 12:05

Matrix: Water

Date Received: 11/18/16 08:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020		5	332046	11/21/16 20:19	AJR	TAL PEN
Total/NA	Prep	7470A			332741	11/28/16 09:32	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 12:53	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332203	11/22/16 19:16	RRC	TAL PEN

Client Sample ID: MGWC-2

Lab Sample ID: 400-130328-10

Date Collected: 11/16/16 12:15

Matrix: Water

Date Received: 11/18/16 08:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332556	11/25/16 21:15	KH1	TAL PEN
Total/NA	Analysis	300.0		10	333094	11/30/16 02:07	TAJ	TAL PEN
Total Recoverable	Prep	3005A			331915	11/21/16 09:23	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332046	11/21/16 20:51	AJR	TAL PEN
Total Recoverable	Prep	3005A	DL		331915	11/21/16 09:23	RJB	TAL PEN
Total Recoverable	Analysis	6020	DL	25	332046	11/21/16 20:55	AJR	TAL PEN
Total/NA	Prep	7470A			332741	11/28/16 09:32	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 13:03	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332203	11/22/16 19:16	RRC	TAL PEN

Client Sample ID: MGWC-12

Lab Sample ID: 400-130328-11

Date Collected: 11/16/16 13:35

Matrix: Water

Date Received: 11/18/16 08:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332556	11/25/16 21:38	KH1	TAL PEN
Total/NA	Analysis	300.0		1	333094	11/30/16 03:15	TAJ	TAL PEN
Total Recoverable	Prep	3005A			331915	11/21/16 09:23	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332046	11/21/16 21:00	AJR	TAL PEN
Total/NA	Prep	7470A			332741	11/28/16 09:32	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 13:04	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332203	11/22/16 19:16	RRC	TAL PEN

Client Sample ID: DUP-1

Lab Sample ID: 400-130328-12

Date Collected: 11/16/16 00:00

Matrix: Water

Date Received: 11/18/16 08:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332556	11/25/16 22:00	KH1	TAL PEN
Total/NA	Analysis	300.0		5	333094	11/30/16 03:38	TAJ	TAL PEN
Total Recoverable	Prep	3005A			331915	11/21/16 09:23	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332046	11/21/16 21:04	AJR	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-130328-1
SDG: AP

Client Sample ID: DUP-1

Lab Sample ID: 400-130328-12

Date Collected: 11/16/16 00:00

Matrix: Water

Date Received: 11/18/16 08:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			332741	11/28/16 09:32	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 13:05	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	331810	11/19/16 15:37	RRC	TAL PEN

Client Sample ID: FB-1

Lab Sample ID: 400-130328-13

Date Collected: 11/16/16 13:20

Matrix: Water

Date Received: 11/18/16 08:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332556	11/25/16 22:23	KH1	TAL PEN
Total/NA	Analysis	300.0		1	333094	11/30/16 04:01	TAJ	TAL PEN
Total Recoverable	Prep	3005A			331915	11/21/16 09:23	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332046	11/21/16 21:09	AJR	TAL PEN
Total/NA	Prep	7470A			332741	11/28/16 09:32	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 13:07	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332203	11/22/16 19:16	RRC	TAL PEN

Client Sample ID: FERB-1

Lab Sample ID: 400-130328-14

Date Collected: 11/16/16 13:25

Matrix: Water

Date Received: 11/18/16 08:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	332556	11/25/16 22:46	KH1	TAL PEN
Total/NA	Analysis	300.0		1	333094	11/30/16 04:23	TAJ	TAL PEN
Total Recoverable	Prep	3005A			331915	11/21/16 09:23	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	332046	11/21/16 21:13	AJR	TAL PEN
Total/NA	Prep	7470A			332741	11/28/16 09:32	JAP	TAL PEN
Total/NA	Analysis	7470A		1	333178	11/30/16 13:08	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	332203	11/22/16 19:16	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 McIntosh

TestAmerica Job ID: 400-130328-1
SDG: AP

HPLC/IC

Analysis Batch: 332498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130328-1	MGWA-10	Total/NA	Water	300.0	
400-130328-3	MGWA-11	Total/NA	Water	300.0	
MB 400-332498/3	Method Blank	Total/NA	Water	300.0	
LCS 400-332498/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-332498/5	Lab Control Sample Dup	Total/NA	Water	300.0	
400-130353-I-2 MS	Matrix Spike	Total/NA	Water	300.0	
400-130353-I-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 332556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130328-4	MGWA-5	Total/NA	Water	300.0	
400-130328-5	MGWA-6	Total/NA	Water	300.0	
400-130328-6	MGWC-7	Total/NA	Water	300.0	
400-130328-7	MGWC-8	Total/NA	Water	300.0	
400-130328-8	MGWC-1	Total/NA	Water	300.0	
400-130328-9	MGWC-3	Total/NA	Water	300.0	
400-130328-10	MGWC-2	Total/NA	Water	300.0	
400-130328-11	MGWC-12	Total/NA	Water	300.0	
400-130328-12	DUP-1	Total/NA	Water	300.0	
400-130328-13	FB-1	Total/NA	Water	300.0	
400-130328-14	FERB-1	Total/NA	Water	300.0	
MB 400-332556/3	Method Blank	Total/NA	Water	300.0	
LCS 400-332556/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-332556/5	Lab Control Sample Dup	Total/NA	Water	300.0	
400-130413-A-2 MS	Matrix Spike	Total/NA	Water	300.0	
400-130413-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 333094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130328-6	MGWC-7	Total/NA	Water	300.0	
400-130328-7	MGWC-8	Total/NA	Water	300.0	
400-130328-8	MGWC-1	Total/NA	Water	300.0	
400-130328-9	MGWC-3	Total/NA	Water	300.0	
400-130328-10	MGWC-2	Total/NA	Water	300.0	
400-130328-11	MGWC-12	Total/NA	Water	300.0	
400-130328-12	DUP-1	Total/NA	Water	300.0	
400-130328-13	FB-1	Total/NA	Water	300.0	
400-130328-14	FERB-1	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	
400-130328-6 MS	MGWC-7	Total/NA	Water	300.0	
400-130328-6 MSD	MGWC-7	Total/NA	Water	300.0	

Metals

Prep Batch: 331915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130328-1	MGWA-10	Total Recoverable	Water	3005A	
400-130328-3	MGWA-11	Total Recoverable	Water	3005A	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-130328-1
SDG: AP

Metals (Continued)

Prep Batch: 331915 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130328-4	MGWA-5	Total Recoverable	Water	3005A	
400-130328-5	MGWA-6	Total Recoverable	Water	3005A	
400-130328-6	MGWC-7	Total Recoverable	Water	3005A	
400-130328-7	MGWC-8	Total Recoverable	Water	3005A	
400-130328-8	MGWC-1	Total Recoverable	Water	3005A	
400-130328-9	MGWC-3	Total Recoverable	Water	3005A	
400-130328-10	MGWC-2	Total Recoverable	Water	3005A	
400-130328-10 - DL	MGWC-2	Total Recoverable	Water	3005A	
400-130328-11	MGWC-12	Total Recoverable	Water	3005A	
400-130328-12	DUP-1	Total Recoverable	Water	3005A	
400-130328-13	FB-1	Total Recoverable	Water	3005A	
400-130328-14	FERB-1	Total Recoverable	Water	3005A	
MB 400-331915/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-331915/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-130004-A-1-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-130004-A-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 332046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130328-1	MGWA-10	Total Recoverable	Water	6020	331915
400-130328-3	MGWA-11	Total Recoverable	Water	6020	331915
400-130328-4	MGWA-5	Total Recoverable	Water	6020	331915
400-130328-5	MGWA-6	Total Recoverable	Water	6020	331915
400-130328-6	MGWC-7	Total Recoverable	Water	6020	331915
400-130328-7	MGWC-8	Total Recoverable	Water	6020	331915
400-130328-8	MGWC-1	Total Recoverable	Water	6020	331915
400-130328-9	MGWC-3	Total Recoverable	Water	6020	331915
400-130328-10	MGWC-2	Total Recoverable	Water	6020	331915
400-130328-10 - DL	MGWC-2	Total Recoverable	Water	6020	331915
400-130328-11	MGWC-12	Total Recoverable	Water	6020	331915
400-130328-12	DUP-1	Total Recoverable	Water	6020	331915
400-130328-13	FB-1	Total Recoverable	Water	6020	331915
400-130328-14	FERB-1	Total Recoverable	Water	6020	331915
MB 400-331915/1-A ^5	Method Blank	Total Recoverable	Water	6020	331915
LCS 400-331915/2-A	Lab Control Sample	Total Recoverable	Water	6020	331915
400-130004-A-1-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	331915
400-130004-A-1-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	331915

Prep Batch: 332741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130328-1	MGWA-10	Total/NA	Water	7470A	
400-130328-3	MGWA-11	Total/NA	Water	7470A	
400-130328-4	MGWA-5	Total/NA	Water	7470A	
400-130328-5	MGWA-6	Total/NA	Water	7470A	
400-130328-6	MGWC-7	Total/NA	Water	7470A	
400-130328-7	MGWC-8	Total/NA	Water	7470A	
400-130328-8	MGWC-1	Total/NA	Water	7470A	
400-130328-9	MGWC-3	Total/NA	Water	7470A	
400-130328-10	MGWC-2	Total/NA	Water	7470A	
400-130328-11	MGWC-12	Total/NA	Water	7470A	
400-130328-12	DUP-1	Total/NA	Water	7470A	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-130328-1
SDG: AP

Metals (Continued)

Prep Batch: 332741 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130328-13	FB-1	Total/NA	Water	7470A	
400-130328-14	FERB-1	Total/NA	Water	7470A	
MB 400-332741/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-332741/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-130430-G-4-B MS	Matrix Spike	Total/NA	Water	7470A	
400-130430-G-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 333178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130328-1	MGWA-10	Total/NA	Water	7470A	332741
400-130328-3	MGWA-11	Total/NA	Water	7470A	332741
400-130328-4	MGWA-5	Total/NA	Water	7470A	332741
400-130328-5	MGWA-6	Total/NA	Water	7470A	332741
400-130328-6	MGWC-7	Total/NA	Water	7470A	332741
400-130328-7	MGWC-8	Total/NA	Water	7470A	332741
400-130328-8	MGWC-1	Total/NA	Water	7470A	332741
400-130328-9	MGWC-3	Total/NA	Water	7470A	332741
400-130328-10	MGWC-2	Total/NA	Water	7470A	332741
400-130328-11	MGWC-12	Total/NA	Water	7470A	332741
400-130328-12	DUP-1	Total/NA	Water	7470A	332741
400-130328-13	FB-1	Total/NA	Water	7470A	332741
400-130328-14	FERB-1	Total/NA	Water	7470A	332741
MB 400-332741/14-A	Method Blank	Total/NA	Water	7470A	332741
LCS 400-332741/15-A	Lab Control Sample	Total/NA	Water	7470A	332741
400-130430-G-4-B MS	Matrix Spike	Total/NA	Water	7470A	332741
400-130430-G-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	332741

General Chemistry

Analysis Batch: 331810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130328-12	DUP-1	Total/NA	Water	SM 2540C	
MB 400-331810/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-331810/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-130191-B-2 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 332203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130328-1	MGWA-10	Total/NA	Water	SM 2540C	
400-130328-3	MGWA-11	Total/NA	Water	SM 2540C	
400-130328-4	MGWA-5	Total/NA	Water	SM 2540C	
400-130328-5	MGWA-6	Total/NA	Water	SM 2540C	
400-130328-6	MGWC-7	Total/NA	Water	SM 2540C	
400-130328-7	MGWC-8	Total/NA	Water	SM 2540C	
400-130328-8	MGWC-1	Total/NA	Water	SM 2540C	
400-130328-9	MGWC-3	Total/NA	Water	SM 2540C	
400-130328-10	MGWC-2	Total/NA	Water	SM 2540C	
400-130328-11	MGWC-12	Total/NA	Water	SM 2540C	
400-130328-13	FB-1	Total/NA	Water	SM 2540C	
400-130328-14	FERB-1	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-130328-1
SDG: AP

General Chemistry (Continued)

Analysis Batch: 332203 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-332203/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-332203/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-130328-3 DU	MGWA-11	Total/NA	Water	SM 2540C	
400-130328-11 DU	MGWC-12	Total/NA	Water	SM 2540C	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

QC Sample Results

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

TestAmerica Job ID: 400-130328-1
SDG: AP

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-332498/3
Matrix: Water
Analysis Batch: 332498

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			11/23/16 16:02	1
Fluoride	<0.082		0.20	0.082	mg/L			11/23/16 16:02	1
Sulfate	<0.70		1.0	0.70	mg/L			11/23/16 16:02	1

Lab Sample ID: LCS 400-332498/4
Matrix: Water
Analysis Batch: 332498

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	10.2		mg/L		102	90 - 110
Sulfate	10.0	9.64		mg/L		96	90 - 110

Lab Sample ID: LCSD 400-332498/5
Matrix: Water
Analysis Batch: 332498

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	10.4		mg/L		104	90 - 110	2	15
Sulfate	10.0	9.86		mg/L		99	90 - 110	2	15

Lab Sample ID: 400-130353-I-2 MS
Matrix: Water
Analysis Batch: 332498

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	2700	E	500	3090	E 4	mg/L		88	80 - 120
Fluoride	26		500	583		mg/L		111	80 - 120
Sulfate	810		500	1310		mg/L		100	80 - 120

Lab Sample ID: 400-130353-I-2 MSD
Matrix: Water
Analysis Batch: 332498

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	2700	E	500	3080	E 4	mg/L		84	80 - 120	1	20
Fluoride	26		500	582		mg/L		111	80 - 120	0	20
Sulfate	810		500	1310		mg/L		100	80 - 120	0	20

Lab Sample ID: MB 400-332556/3
Matrix: Water
Analysis Batch: 332556

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			11/25/16 11:44	1
Fluoride	<0.082		0.20	0.082	mg/L			11/25/16 11:44	1
Sulfate	<0.70		1.0	0.70	mg/L			11/25/16 11:44	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-130328-1
SDG: AP

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 400-332556/4
Matrix: Water
Analysis Batch: 332556

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	10.1		mg/L		101	90 - 110
Sulfate	10.0	9.83		mg/L		98	90 - 110

Lab Sample ID: LCSD 400-332556/5
Matrix: Water
Analysis Batch: 332556

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	9.99		mg/L		100	90 - 110	1	15
Fluoride	10.0	10.0		mg/L		100	90 - 110	0	15
Sulfate	10.0	9.75		mg/L		98	90 - 110	1	15

Lab Sample ID: 400-130413-A-2 MS
Matrix: Water
Analysis Batch: 332556

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	150		500	662		mg/L		102	80 - 120
Fluoride	<4.1		500	516		mg/L		103	80 - 120
Sulfate	590		500	1050		mg/L		93	80 - 120

Lab Sample ID: 400-130413-A-2 MSD
Matrix: Water
Analysis Batch: 332556

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	150		500	662		mg/L		102	80 - 120	0	20
Fluoride	<4.1		500	521		mg/L		104	80 - 120	1	20
Sulfate	590		500	1060		mg/L		93	80 - 120	0	20

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

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-130328-1
SDG: AP

Method: 300.0 - Anions, Ion Chromatography (Continued)

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: 400-130328-6 MS

Matrix: Water

Analysis Batch: 333094

Client Sample ID: MGWC-7

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
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: 400-130328-6 MSD

Matrix: Water

Analysis Batch: 333094

Client Sample ID: MGWC-7

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	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 400-331915/1-A ^5

Matrix: Water

Analysis Batch: 332046

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 331915

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 09:23	11/21/16 15:17	5
Arsenic	0.000520	J	0.0013	0.00046	mg/L		11/21/16 09:23	11/21/16 15:17	5
Barium	<0.00049		0.0025	0.00049	mg/L		11/21/16 09:23	11/21/16 15:17	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 15:17	5
Boron	<0.021		0.050	0.021	mg/L		11/21/16 09:23	11/21/16 15:17	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		11/21/16 09:23	11/21/16 15:17	5
Calcium	<0.13		0.25	0.13	mg/L		11/21/16 09:23	11/21/16 15:17	5
Chromium	<0.0011		0.0025	0.0011	mg/L		11/21/16 09:23	11/21/16 15:17	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		11/21/16 09:23	11/21/16 15:17	5
Lead	<0.00035		0.0013	0.00035	mg/L		11/21/16 09:23	11/21/16 15:17	5
Lithium	<0.0032		0.0050	0.0032	mg/L		11/21/16 09:23	11/21/16 15:17	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		11/21/16 09:23	11/21/16 15:17	5
Selenium	0.000470	J	0.0013	0.00024	mg/L		11/21/16 09:23	11/21/16 15:17	5
Thallium	<0.000085		0.00050	0.000085	mg/L		11/21/16 09:23	11/21/16 15:17	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-130328-1
SDG: AP

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

Lab Sample ID: LCS 400-331915/2-A
Matrix: Water
Analysis Batch: 332046

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 331915

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0527		mg/L		105	80 - 120
Arsenic	0.0500	0.0541		mg/L		108	80 - 120
Barium	0.0500	0.0488		mg/L		98	80 - 120
Beryllium	0.0500	0.0488		mg/L		98	80 - 120
Boron	0.100	0.107		mg/L		107	80 - 120
Cadmium	0.0500	0.0518		mg/L		104	80 - 120
Calcium	5.00	4.86		mg/L		97	80 - 120
Chromium	0.0500	0.0506		mg/L		101	80 - 120
Cobalt	0.0500	0.0491		mg/L		98	80 - 120
Lead	0.0500	0.0476		mg/L		95	80 - 120
Lithium	0.0500	0.0525		mg/L		105	80 - 120
Molybdenum	0.0500	0.0510		mg/L		102	80 - 120
Selenium	0.0500	0.0510		mg/L		102	80 - 120
Thallium	0.0100	0.0100		mg/L		100	80 - 120

Lab Sample ID: 400-130004-A-1-B MS ^5
Matrix: Water
Analysis Batch: 332046

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 331915

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0532		mg/L		106	75 - 125
Arsenic	0.011	B	0.0500	0.0635		mg/L		104	75 - 125
Barium	0.021		0.0500	0.0679		mg/L		93	75 - 125
Beryllium	0.00047	J	0.0500	0.0481		mg/L		95	75 - 125
Boron	4.3	E	0.100	4.69	E 4	mg/L		347	75 - 125
Cadmium	<0.00034		0.0500	0.0493		mg/L		99	75 - 125
Calcium	110		5.00	108	4	mg/L		48	75 - 125
Chromium	<0.0011		0.0500	0.0475		mg/L		95	75 - 125
Cobalt	0.0085		0.0500	0.0542		mg/L		91	75 - 125
Lead	0.00092	J	0.0500	0.0487		mg/L		96	75 - 125
Lithium	0.0095		0.0500	0.0638		mg/L		109	75 - 125
Molybdenum	<0.00085		0.0500	0.0495		mg/L		99	75 - 125
Selenium	0.013	B	0.0500	0.0634		mg/L		100	75 - 125
Thallium	0.00028	J	0.0100	0.0104		mg/L		101	75 - 125

Lab Sample ID: 400-130004-A-1-C MSD ^5
Matrix: Water
Analysis Batch: 332046

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 331915

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0519		mg/L		104	75 - 125	2	20
Arsenic	0.011	B	0.0500	0.0644		mg/L		106	75 - 125	1	20
Barium	0.021		0.0500	0.0681		mg/L		94	75 - 125	0	20
Beryllium	0.00047	J	0.0500	0.0485		mg/L		96	75 - 125	1	20
Boron	4.3	E	0.100	4.68	E 4	mg/L		344	75 - 125	0	20
Cadmium	<0.00034		0.0500	0.0512		mg/L		102	75 - 125	4	20
Calcium	110		5.00	108	4	mg/L		66	75 - 125	1	20
Chromium	<0.0011		0.0500	0.0494		mg/L		99	75 - 125	4	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-130328-1
SDG: AP

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

Lab Sample ID: 400-130004-A-1-C MSD ^5
Matrix: Water
Analysis Batch: 332046

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 331915

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Cobalt	0.0085		0.0500	0.0553		mg/L		94	75 - 125	2	20
Lead	0.00092	J	0.0500	0.0492		mg/L		97	75 - 125	1	20
Lithium	0.0095		0.0500	0.0639		mg/L		109	75 - 125	0	20
Molybdenum	<0.00085		0.0500	0.0514		mg/L		103	75 - 125	4	20
Selenium	0.013	B	0.0500	0.0626		mg/L		99	75 - 125	1	20
Thallium	0.00028	J	0.0100	0.0106		mg/L		103	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-332741/14-A
Matrix: Water
Analysis Batch: 333178

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 332741

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	0.000103	J	0.00020	0.000070	mg/L		11/28/16 09:17	11/30/16 12:42	1

Lab Sample ID: LCS 400-332741/15-A
Matrix: Water
Analysis Batch: 333178

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 332741

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Mercury	0.00101	0.000990		mg/L		98	80 - 120

Lab Sample ID: 400-130430-G-4-B MS
Matrix: Water
Analysis Batch: 333178

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 332741

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier		Result	Qualifier				Limits
Mercury	0.00012	J B	0.00201	0.00193		mg/L		90	80 - 120

Lab Sample ID: 400-130430-G-4-C MSD
Matrix: Water
Analysis Batch: 333178

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 332741

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits		
Mercury	0.00012	J B	0.00201	0.00193		mg/L		90	80 - 120	0	20

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

Lab Sample ID: MB 400-331810/1
Matrix: Water
Analysis Batch: 331810

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			11/19/16 15:37	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-130328-1
 SDG: AP

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

Lab Sample ID: LCS 400-331810/2
Matrix: Water
Analysis Batch: 331810

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	320		mg/L		109	78 - 122

Lab Sample ID: 400-130191-B-2 DU
Matrix: Water
Analysis Batch: 331810

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	110		108		mg/L		0	5

Lab Sample ID: MB 400-332203/1
Matrix: Water
Analysis Batch: 332203

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			11/22/16 19:16	1

Lab Sample ID: LCS 400-332203/2
Matrix: Water
Analysis Batch: 332203

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

Lab Sample ID: 400-130328-3 DU
Matrix: Water
Analysis Batch: 332203

Client Sample ID: MGWA-11
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	270		268		mg/L		0.7	5

Lab Sample ID: 400-130328-11 DU
Matrix: Water
Analysis Batch: 332203

Client Sample ID: MGWC-12
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	240		242		mg/L		0	5

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

Chain of Custody Record

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 THE LEADER IN ENVIRONMENTAL TESTING

681-Atlanta

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: CCR - Plant McIntosh Site: AP		Sampler: TP Lab PM: Whitmire, Cheyenne R ERM - T. Payne, M. Thomas, C. Hurdle, Tracy Wardell, W. Virgo WFI Phone: 678-486-2700 E-Mail: cheyenne.whitmire@testamericainc.com		Center Tracking No(s): Page: 1 of 2 Job #:							
Analysis Requested Due Date Requested: TAT Requested (days): PO #: WO #: Project #: SSO#: Field Filled Sample (Yes or No)		Metals Appendix III & IV - EPA 6020 & EPA 7470 TDS - SM 2540C; Cl, F, SO4 - EPA 300 Radium 226 & 228 - SW-846 9315 & 9320		Total Number of Containers Special Instructions/Note: Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2OAS R - Na2SO3 S - H2SO4 G - Amchlor H - Ascorbic Acid I - Ice J - DI Water V - MCAA W - pH 4-5 Z - other (specify) Other:							
Sample Identification Sample Date Sample Time Sample Type (C=comp, G=grab) Matrix (W=water, S=solid, O=soil, B=biological, T=tissue, A=air) Preservation Code		TDs - SM 2540C; Cl, F, SO4 - EPA 300 Metals Appendix III & IV - EPA 6020 & EPA 7470 Radium 226 & 228 - SW-846 9315 & 9320		Total Number of Containers Special Instructions/Note: Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2OAS R - Na2SO3 S - H2SO4 G - Amchlor H - Ascorbic Acid I - Ice J - DI Water V - MCAA W - pH 4-5 Z - other (specify) Other:							
MGWA-10	11/16/16	8:55	G	W	1	1	1	1	1	3	
MGWA-11	11/16/16	10:30	G	W	1	1	1	1	1	3	
MGWA-5	11/16/16	10:45	G	W	1	1	1	1	1	3	
MGWA-6	11/16/16	10:30	G	W	1	1	1	1	1	3	
MGWC-7	11/16/16	11:50	G	W	1	1	1	1	1	3	
MGWC-8	11/16/16	11:53	G	W	1	1	1	1	1	3	
MGWC-1	11/16/16	13:27	G	W	1	1	1	1	1	3	
MGWC-3	11/16/16	12:05	G	W	1	1	1	1	1	3	
MGWC-2	11/16/16	12:15	G	W	1	1	1	1	1	3	
MGWC-12	11/16/16	13:35	G	W	1	1	1	1	1	3	
DUP-1	11/16/16	-	G	W	1	1	1	1	1	3	
Possible Hazard Identification <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)		Sample Disposal (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 <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements: Please also provide results to Maria Padilla and Heath McCorkle							
Empty Kit Relinquished by: Relinquished by: Will Virgo Date/Time: 11/17/16 10:36 Company: ERM		Relinquished by: Relinquished by: [Signature] Date/Time: 11/17/16 Company: ERM		Relinquished by: Relinquished by: [Signature] Date/Time: 11/18/16 8:33 Company: TH							
Relinquished by: Relinquished by: [Signature] Date/Time: 11/18/16 Company: TH		Relinquished by: Relinquished by: [Signature] Date/Time: 11/18/16 Company: TH		Cooler Temperature (°C and Other Remarks): 5.0°C, 4.6°C IRS							

Chain of Custody Record

Client Information Client Contact: Jolu Abraham 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 McIntosh Site: AP		Sampler: ERM - T. Payne, M. Thomas, C. Hurdle, Tracy Wardell, W. Virgo Lab P/N: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com		Carrier Tracking No(s): COC No: Page: 2 of 2 Job #:				
Due Date Requested: TAT Requested (days): PO #: WO #: Project #: SSOW#:		Analysis Requested						
Sample Identification FB-1 FERB-1		Sample Date 11/16/16 11/16/16	Sample Time 13:20 13:25	Sample Type (C=Comp, G=grab) G G	Matrix (W=Water, S=Soil, O=Other) W W	Retention/MSR (Yes or No) X X	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:
Possible Hazard Identification <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		Sample Disposal (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 <input type="checkbox"/> Archive For _____ Months						
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements: Please also provide results to Maria Padilla and Heath McCorkle						
Empty Kit Relinquished by: Will Vireo Relinquished by: [Signature] Relinquished by: [Signature]		Date: 11/17/16 1036 11/17/16 1400		Method of Shipment: Received by: [Signature] Company: ERA Received by: [Signature] Company: ERA Received by: [Signature] Company: ERA				
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and °F: 5.0°C, 41.6°C Remarks:						



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-130328-1

SDG Number: AP

Login Number: 130328

List Number: 1

Creator: Hughes, Nicholas T

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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	4.6°C, 5.0°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 McIntosh

TestAmerica Job ID: 400-130328-1
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: 400-130328-2

TestAmerica Sample Delivery Group: AP

Client Project/Site: CCR - Plant McIntosh

For:

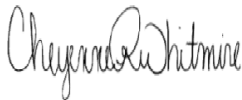
Southern Company

241 Ralph McGill Blvd SE

B10185

Atlanta, Georgia 30308

Attn: Joju Abraham



Authorized for release by:

12/30/2016 1:27:31 PM

Cheyenne Whitmire, Project Manager II

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cheyenne.whitmire@testamericainc.com

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

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

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Method Summary

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

TestAmerica Job ID: 400-130328-2
SDG: AP

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 McIntosh

TestAmerica Job ID: 400-130328-2
SDG: AP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-130328-1	MGWA-10	Water	11/16/16 08:55	11/18/16 08:33
400-130328-3	MGWA-11	Water	11/16/16 10:30	11/18/16 08:33
400-130328-4	MGWA-5	Water	11/16/16 10:45	11/18/16 08:33
400-130328-5	MGWA-6	Water	11/16/16 10:30	11/18/16 08:33
400-130328-6	MGWC-7	Water	11/16/16 11:50	11/18/16 08:33
400-130328-7	MGWC-8	Water	11/16/16 11:53	11/18/16 08:33
400-130328-8	MGWC-1	Water	11/16/16 13:27	11/18/16 08:33
400-130328-9	MGWC-3	Water	11/16/16 12:05	11/18/16 08:33
400-130328-10	MGWC-2	Water	11/16/16 12:15	11/18/16 08:33
400-130328-11	MGWC-12	Water	11/16/16 13:35	11/18/16 08:33
400-130328-12	DUP-1	Water	11/16/16 00:00	11/18/16 08:33
400-130328-13	FB-1	Water	11/16/16 13:20	11/18/16 08:33
400-130328-14	FERB-1	Water	11/16/16 13:25	11/18/16 08:33

Client Sample Results

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

TestAmerica Job ID: 400-130328-2
 SDG: AP

Client Sample ID: MGWA-10

Lab Sample ID: 400-130328-1

Date Collected: 11/16/16 08:55

Matrix: Water

Date Received: 11/18/16 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	0.445		0.283	0.286	1.00	0.381	pCi/L	11/28/16 10:07	12/29/16 06:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.2		40 - 110					11/28/16 10:07	12/29/16 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	-0.0186	U	0.280	0.280	1.00	0.503	pCi/L	11/28/16 15:20	12/28/16 18:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.2		40 - 110					11/28/16 15:20	12/28/16 18:19	1
Y Carrier	89.0		40 - 110					11/28/16 15:20	12/28/16 18:19	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	0.427	U	0.398	0.400	5.00	0.503	pCi/L		12/29/16 18:35	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-2
 SDG: AP

Client Sample ID: MGWA-11

Lab Sample ID: 400-130328-3

Date Collected: 11/16/16 10:30

Matrix: Water

Date Received: 11/18/16 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	0.341	U	0.245	0.247	1.00	0.342	pCi/L	11/28/16 10:07	12/29/16 07:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.3		40 - 110					11/28/16 10:07	12/29/16 07:00	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0181	U	0.337	0.337	1.00	0.595	pCi/L	11/28/16 15:20	12/28/16 18:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.3		40 - 110					11/28/16 15:20	12/28/16 18:19	1
Y Carrier	89.0		40 - 110					11/28/16 15:20	12/28/16 18:19	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	0.322	U	0.416	0.417	5.00	0.595	pCi/L		12/29/16 18:35	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-2
 SDG: AP

Client Sample ID: MGWA-5

Lab Sample ID: 400-130328-4

Date Collected: 11/16/16 10:45

Matrix: Water

Date Received: 11/18/16 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	0.389	U	0.282	0.284	1.00	0.405	pCi/L	11/28/16 10:07	12/29/16 07:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	73.2		40 - 110					11/28/16 10:07	12/29/16 07:00	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0565	U	0.286	0.286	1.00	0.519	pCi/L	11/28/16 15:20	12/28/16 18:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	73.2		40 - 110					11/28/16 15:20	12/28/16 18:20	1
Y Carrier	90.1		40 - 110					11/28/16 15:20	12/28/16 18:20	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	0.333	U	0.401	0.403	5.00	0.519	pCi/L		12/29/16 18:35	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-2
 SDG: AP

Client Sample ID: MGWA-6

Lab Sample ID: 400-130328-5

Date Collected: 11/16/16 10:30

Matrix: Water

Date Received: 11/18/16 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	0.611		0.297	0.302	1.00	0.333	pCi/L	11/28/16 10:07	12/29/16 07:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	71.8		40 - 110					11/28/16 10:07	12/29/16 07:00	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.252	U	0.324	0.325	1.00	0.538	pCi/L	11/28/16 15:20	12/28/16 18:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	71.8		40 - 110					11/28/16 15:20	12/28/16 18:20	1
Y Carrier	87.1		40 - 110					11/28/16 15:20	12/28/16 18:20	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	0.863		0.439	0.443	5.00	0.538	pCi/L		12/29/16 18:35	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-2
 SDG: AP

Client Sample ID: MGWC-7

Lab Sample ID: 400-130328-6

Date Collected: 11/16/16 11:50

Matrix: Water

Date Received: 11/18/16 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	0.650		0.333	0.338	1.00	0.420	pCi/L	11/28/16 10:07	12/29/16 07:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	72.4		40 - 110					11/28/16 10:07	12/29/16 07:00	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.205	U	0.301	0.302	1.00	0.506	pCi/L	11/28/16 15:20	12/28/16 18:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	72.4		40 - 110					11/28/16 15:20	12/28/16 18:20	1
Y Carrier	84.9		40 - 110					11/28/16 15:20	12/28/16 18:20	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	0.855		0.449	0.454	5.00	0.506	pCi/L		12/29/16 18:35	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-2
 SDG: AP

Client Sample ID: MGWC-8

Lab Sample ID: 400-130328-7

Date Collected: 11/16/16 11:53

Matrix: Water

Date Received: 11/18/16 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	0.728		0.312	0.318	1.00	0.356	pCi/L	11/28/16 10:07	12/29/16 07:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.5		40 - 110					11/28/16 10:07	12/29/16 07:00	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.760		0.313	0.321	1.00	0.436	pCi/L	11/28/16 15:20	12/28/16 18:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.5		40 - 110					11/28/16 15:20	12/28/16 18:20	1
Y Carrier	88.2		40 - 110					11/28/16 15:20	12/28/16 18:20	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	1.49		0.442	0.452	5.00	0.436	pCi/L		12/29/16 18:35	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-2
 SDG: AP

Client Sample ID: MGWC-1

Lab Sample ID: 400-130328-8

Date Collected: 11/16/16 13:27

Matrix: Water

Date Received: 11/18/16 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	0.866		0.375	0.383	1.00	0.436	pCi/L	11/28/16 10:07	12/29/16 07:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	69.2		40 - 110					11/28/16 10:07	12/29/16 07:10	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.718		0.363	0.369	1.00	0.537	pCi/L	11/28/16 15:20	12/28/16 18:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	69.2		40 - 110					11/28/16 15:20	12/28/16 18:21	1
Y Carrier	87.5		40 - 110					11/28/16 15:20	12/28/16 18:21	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	1.58		0.522	0.532	5.00	0.537	pCi/L		12/29/16 18:35	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-2
 SDG: AP

Client Sample ID: MGWC-3

Lab Sample ID: 400-130328-9

Date Collected: 11/16/16 12:05

Matrix: Water

Date Received: 11/18/16 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	1.44		0.438	0.457	1.00	0.373	pCi/L	11/28/16 10:07	12/29/16 07:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	72.4		40 - 110					11/28/16 10:07	12/29/16 07:10	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.458	U	0.304	0.307	1.00	0.467	pCi/L	11/28/16 15:20	12/28/16 18:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	72.4		40 - 110					11/28/16 15:20	12/28/16 18:21	1
Y Carrier	88.2		40 - 110					11/28/16 15:20	12/28/16 18:21	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	1.90		0.533	0.550	5.00	0.467	pCi/L		12/29/16 18:35	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-2
 SDG: AP

Client Sample ID: MGWC-2

Lab Sample ID: 400-130328-10

Date Collected: 11/16/16 12:15

Matrix: Water

Date Received: 11/18/16 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	0.218	U	0.248	0.249	1.00	0.401	pCi/L	11/28/16 10:07	12/29/16 07:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	71.2		40 - 110					11/28/16 10:07	12/29/16 07:11	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.475	U	0.318	0.321	1.00	0.491	pCi/L	11/28/16 15:20	12/28/16 18:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	71.2		40 - 110					11/28/16 15:20	12/28/16 18:21	1
Y Carrier	88.6		40 - 110					11/28/16 15:20	12/28/16 18:21	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	0.694		0.403	0.406	5.00	0.491	pCi/L		12/29/16 18:35	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-2
SDG: AP

Client Sample ID: MGWC-12

Lab Sample ID: 400-130328-11

Date Collected: 11/16/16 13:35

Matrix: Water

Date Received: 11/18/16 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	0.310	U	0.342	0.343	1.00	0.553	pCi/L	11/28/16 10:07	12/29/16 07:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	61.5		40 - 110					11/28/16 10:07	12/29/16 07:11	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.487	U	0.359	0.362	1.00	0.559	pCi/L	11/28/16 15:20	12/28/16 18:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	61.5		40 - 110					11/28/16 15:20	12/28/16 18:21	1
Y Carrier	82.6		40 - 110					11/28/16 15:20	12/28/16 18:21	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	0.798		0.496	0.498	5.00	0.559	pCi/L		12/29/16 18:35	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-2
 SDG: AP

Client Sample ID: DUP-1

Lab Sample ID: 400-130328-12

Date Collected: 11/16/16 00:00

Matrix: Water

Date Received: 11/18/16 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	0.935		0.362	0.372	1.00	0.371	pCi/L	11/28/16 10:07	12/29/16 07:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.1		40 - 110					11/28/16 10:07	12/29/16 07:11	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.181	U	0.266	0.266	1.00	0.446	pCi/L	11/28/16 15:20	12/28/16 18:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.1		40 - 110					11/28/16 15:20	12/28/16 18:21	1
Y Carrier	89.0		40 - 110					11/28/16 15:20	12/28/16 18:21	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	1.12		0.449	0.457	5.00	0.446	pCi/L		12/29/16 18:35	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-2
 SDG: AP

Client Sample ID: FB-1
Date Collected: 11/16/16 13:20
Date Received: 11/18/16 08:33

Lab Sample ID: 400-130328-13
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	0.157	U	0.212	0.212	1.00	0.356	pCi/L	11/28/16 10:07	12/29/16 08:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.1		40 - 110					11/28/16 10:07	12/29/16 08:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0570	U	0.256	0.256	1.00	0.452	pCi/L	11/28/16 15:20	12/28/16 18:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.1		40 - 110					11/28/16 15:20	12/28/16 18:21	1
Y Carrier	88.6		40 - 110					11/28/16 15:20	12/28/16 18:21	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	0.214	U	0.333	0.333	5.00	0.452	pCi/L		12/29/16 18:35	1

Client Sample Results

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

TestAmerica Job ID: 400-130328-2
 SDG: AP

Client Sample ID: FERB-1
Date Collected: 11/16/16 13:25
Date Received: 11/18/16 08:33

Lab Sample ID: 400-130328-14
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	-0.102	U	0.215	0.215	1.00	0.472	pCi/L	11/28/16 10:07	12/29/16 08:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	73.2		40 - 110					11/28/16 10:07	12/29/16 08:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.282	U	0.288	0.289	1.00	0.468	pCi/L	11/28/16 15:20	12/28/16 18:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	73.2		40 - 110					11/28/16 15:20	12/28/16 18:21	1
Y Carrier	88.6		40 - 110					11/28/16 15:20	12/28/16 18:21	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	0.180	U	0.360	0.361	5.00	0.472	pCi/L		12/29/16 18:35	1

Definitions/Glossary

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

TestAmerica Job ID: 400-130328-2
SDG: AP

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 McIntosh

TestAmerica Job ID: 400-130328-2
SDG: AP

Client Sample ID: MGWA-10

Date Collected: 11/16/16 08:55

Date Received: 11/18/16 08:33

Lab Sample ID: 400-130328-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281185	11/28/16 10:07	CMC	TAL SL
Total/NA	Analysis	9315		1	285756	12/29/16 06:59	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281250	11/28/16 15:20	MBC	TAL SL
Total/NA	Analysis	9320		1	285700	12/28/16 18:19	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285852	12/29/16 18:35	RTM	TAL SL

Client Sample ID: MGWA-11

Date Collected: 11/16/16 10:30

Date Received: 11/18/16 08:33

Lab Sample ID: 400-130328-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281185	11/28/16 10:07	CMC	TAL SL
Total/NA	Analysis	9315		1	285756	12/29/16 07:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281250	11/28/16 15:20	MBC	TAL SL
Total/NA	Analysis	9320		1	285700	12/28/16 18:19	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285852	12/29/16 18:35	RTM	TAL SL

Client Sample ID: MGWA-5

Date Collected: 11/16/16 10:45

Date Received: 11/18/16 08:33

Lab Sample ID: 400-130328-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281185	11/28/16 10:07	CMC	TAL SL
Total/NA	Analysis	9315		1	285756	12/29/16 07:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281250	11/28/16 15:20	MBC	TAL SL
Total/NA	Analysis	9320		1	285700	12/28/16 18:20	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285852	12/29/16 18:35	RTM	TAL SL

Client Sample ID: MGWA-6

Date Collected: 11/16/16 10:30

Date Received: 11/18/16 08:33

Lab Sample ID: 400-130328-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281185	11/28/16 10:07	CMC	TAL SL
Total/NA	Analysis	9315		1	285756	12/29/16 07:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281250	11/28/16 15:20	MBC	TAL SL
Total/NA	Analysis	9320		1	285700	12/28/16 18:20	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285852	12/29/16 18:35	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-130328-2
SDG: AP

Client Sample ID: MGWC-7

Lab Sample ID: 400-130328-6

Date Collected: 11/16/16 11:50

Matrix: Water

Date Received: 11/18/16 08:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281185	11/28/16 10:07	CMC	TAL SL
Total/NA	Analysis	9315		1	285756	12/29/16 07:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281250	11/28/16 15:20	MBC	TAL SL
Total/NA	Analysis	9320		1	285700	12/28/16 18:20	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285852	12/29/16 18:35	RTM	TAL SL

Client Sample ID: MGWC-8

Lab Sample ID: 400-130328-7

Date Collected: 11/16/16 11:53

Matrix: Water

Date Received: 11/18/16 08:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281185	11/28/16 10:07	CMC	TAL SL
Total/NA	Analysis	9315		1	285756	12/29/16 07:00	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281250	11/28/16 15:20	MBC	TAL SL
Total/NA	Analysis	9320		1	285700	12/28/16 18:20	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285852	12/29/16 18:35	RTM	TAL SL

Client Sample ID: MGWC-1

Lab Sample ID: 400-130328-8

Date Collected: 11/16/16 13:27

Matrix: Water

Date Received: 11/18/16 08:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281185	11/28/16 10:07	CMC	TAL SL
Total/NA	Analysis	9315		1	285758	12/29/16 07:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281250	11/28/16 15:20	MBC	TAL SL
Total/NA	Analysis	9320		1	285700	12/28/16 18:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285852	12/29/16 18:35	RTM	TAL SL

Client Sample ID: MGWC-3

Lab Sample ID: 400-130328-9

Date Collected: 11/16/16 12:05

Matrix: Water

Date Received: 11/18/16 08:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281185	11/28/16 10:07	CMC	TAL SL
Total/NA	Analysis	9315		1	285758	12/29/16 07:10	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281250	11/28/16 15:20	MBC	TAL SL
Total/NA	Analysis	9320		1	285700	12/28/16 18:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285852	12/29/16 18:35	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-130328-2
SDG: AP

Client Sample ID: MGWC-2

Lab Sample ID: 400-130328-10

Date Collected: 11/16/16 12:15

Matrix: Water

Date Received: 11/18/16 08:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281185	11/28/16 10:07	CMC	TAL SL
Total/NA	Analysis	9315		1	285758	12/29/16 07:11	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281250	11/28/16 15:20	MBC	TAL SL
Total/NA	Analysis	9320		1	285700	12/28/16 18:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285852	12/29/16 18:35	RTM	TAL SL

Client Sample ID: MGWC-12

Lab Sample ID: 400-130328-11

Date Collected: 11/16/16 13:35

Matrix: Water

Date Received: 11/18/16 08:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281185	11/28/16 10:07	CMC	TAL SL
Total/NA	Analysis	9315		1	285758	12/29/16 07:11	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281250	11/28/16 15:20	MBC	TAL SL
Total/NA	Analysis	9320		1	285700	12/28/16 18:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285852	12/29/16 18:35	RTM	TAL SL

Client Sample ID: DUP-1

Lab Sample ID: 400-130328-12

Date Collected: 11/16/16 00:00

Matrix: Water

Date Received: 11/18/16 08:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281185	11/28/16 10:07	CMC	TAL SL
Total/NA	Analysis	9315		1	285758	12/29/16 07:11	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281250	11/28/16 15:20	MBC	TAL SL
Total/NA	Analysis	9320		1	285700	12/28/16 18:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285852	12/29/16 18:35	RTM	TAL SL

Client Sample ID: FB-1

Lab Sample ID: 400-130328-13

Date Collected: 11/16/16 13:20

Matrix: Water

Date Received: 11/18/16 08:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281185	11/28/16 10:07	CMC	TAL SL
Total/NA	Analysis	9315		1	285758	12/29/16 08:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281250	11/28/16 15:20	MBC	TAL SL
Total/NA	Analysis	9320		1	285700	12/28/16 18:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285852	12/29/16 18:35	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-130328-2
SDG: AP

Client Sample ID: FERB-1

Lab Sample ID: 400-130328-14

Date Collected: 11/16/16 13:25

Matrix: Water

Date Received: 11/18/16 08:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			281185	11/28/16 10:07	CMC	TAL SL
Total/NA	Analysis	9315		1	285758	12/29/16 08:58	RTM	TAL SL
Total/NA	Prep	PrecSep_0			281250	11/28/16 15:20	MBC	TAL SL
Total/NA	Analysis	9320		1	285700	12/28/16 18:21	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	285852	12/29/16 18:35	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 McIntosh

TestAmerica Job ID: 400-130328-2
 SDG: AP

Rad

Prep Batch: 281185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130328-1	MGWA-10	Total/NA	Water	PrecSep-21	
400-130328-3	MGWA-11	Total/NA	Water	PrecSep-21	
400-130328-4	MGWA-5	Total/NA	Water	PrecSep-21	
400-130328-5	MGWA-6	Total/NA	Water	PrecSep-21	
400-130328-6	MGWC-7	Total/NA	Water	PrecSep-21	
400-130328-7	MGWC-8	Total/NA	Water	PrecSep-21	
400-130328-8	MGWC-1	Total/NA	Water	PrecSep-21	
400-130328-9	MGWC-3	Total/NA	Water	PrecSep-21	
400-130328-10	MGWC-2	Total/NA	Water	PrecSep-21	
400-130328-11	MGWC-12	Total/NA	Water	PrecSep-21	
400-130328-12	DUP-1	Total/NA	Water	PrecSep-21	
400-130328-13	FB-1	Total/NA	Water	PrecSep-21	
400-130328-14	FERB-1	Total/NA	Water	PrecSep-21	
MB 160-281185/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-281185/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-130328-10 DU	MGWC-2	Total/NA	Water	PrecSep-21	

Prep Batch: 281250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-130328-1	MGWA-10	Total/NA	Water	PrecSep_0	
400-130328-3	MGWA-11	Total/NA	Water	PrecSep_0	
400-130328-4	MGWA-5	Total/NA	Water	PrecSep_0	
400-130328-5	MGWA-6	Total/NA	Water	PrecSep_0	
400-130328-6	MGWC-7	Total/NA	Water	PrecSep_0	
400-130328-7	MGWC-8	Total/NA	Water	PrecSep_0	
400-130328-8	MGWC-1	Total/NA	Water	PrecSep_0	
400-130328-9	MGWC-3	Total/NA	Water	PrecSep_0	
400-130328-10	MGWC-2	Total/NA	Water	PrecSep_0	
400-130328-11	MGWC-12	Total/NA	Water	PrecSep_0	
400-130328-12	DUP-1	Total/NA	Water	PrecSep_0	
400-130328-13	FB-1	Total/NA	Water	PrecSep_0	
400-130328-14	FERB-1	Total/NA	Water	PrecSep_0	
MB 160-281250/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-281250/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-130328-10 DU	MGWC-2	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-130328-2
 SDG: AP

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-281185/1-A
Matrix: Water
Analysis Batch: 285757

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281185

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1905	U	0.249	0.249	1.00	0.415	pCi/L	11/28/16 10:07	12/29/16 06:55	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	67.5		40 - 110					11/28/16 10:07	12/29/16 06:55	1

Lab Sample ID: LCS 160-281185/2-A
Matrix: Water
Analysis Batch: 285757

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 281185

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.1	15.06		1.86	1.00	0.359	pCi/L	136	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	75.8		40 - 110						

Lab Sample ID: 400-130328-10 DU
Matrix: Water
Analysis Batch: 285758

Client Sample ID: MGWC-2
Prep Type: Total/NA
Prep Batch: 281185

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.218	U	-0.00260	U	0.181	1.00	0.378	pCi/L	0.51	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	76.4		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-281250/1-A
Matrix: Water
Analysis Batch: 285700

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281250

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2074	U	0.342	0.343	1.00	0.577	pCi/L	11/28/16 15:20	12/28/16 18:18	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	67.5		40 - 110					11/28/16 15:20	12/28/16 18:18	1
Y Carrier	83.7		40 - 110					11/28/16 15:20	12/28/16 18:18	1

QC Sample Results

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

TestAmerica Job ID: 400-130328-2
SDG: AP

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

Lab Sample ID: LCS 160-281250/2-A
Matrix: Water
Analysis Batch: 285700

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 281250

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	14.1	15.31		1.70	1.00	0.469	pCi/L	109	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	75.8		40 - 110
Y Carrier	87.9		40 - 110

Lab Sample ID: 400-130328-10 DU
Matrix: Water
Analysis Batch: 285700

Client Sample ID: MGWC-2
Prep Type: Total/NA
Prep Batch: 281250

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.475	U	0.1079	U	0.280	1.00	0.483	pCi/L	0.61	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	76.4		40 - 110
Y Carrier	86.0		40 - 110

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

Lab Sample ID: 400-130328-10 DU
Matrix: Water
Analysis Batch: 285852

Client Sample ID: MGWC-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Combined Radium 226 + 228	0.694		0.1053	U	0.334	5.00	0.483	pCi/L	0.80	

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: 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: CCR - Plant McIntosh
 Site: AP

Sample: ERM - T. Payne, M. Thomas, C. Hurdle, Tracy Wardell, W. Virgo
 Lab Pile: Whitmore, Cheyenne R
 Carrier Tracking No(s):
 Phone: 678-486-2700
 E-Mail: cheyenne.whitmore@testamerica.com

Analysis Requested
 Due Date Requested:
 TAT Requested (days):
 PO #:
 W/O #:
 Project #:
 SSOW #:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Sewage, Other)	Preservation Code	Field Eluted Sample (Yes or No)	TDS - SM 2640C; Cl, F, SO4 - EPA 300	Metals Appendix III & IV - EPA 8020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320	Total Number of Containers	Special Instructions/Note:
MGWA-10	11/16/16	8:55	G	W	N					3	
MGWA-11	11/16/16	10:30	G	W	N					3	
MGWA-5	11/16/16	10:45	G	W	N					3	
MGWA-6	11/16/16	10:30	G	W	N					3	
MGWC-7	11/16/16	11:50	G	W	N					3	
MGWC-8	11/16/16	11:53	G	W	N					3	
MGWC-1	11/16/16	13:27	G	W	N					3	400-130328 COC
MGWC-3	11/16/16	12:05	G	W	N					3	
MGWC-2	11/16/16	12:15	G	W	N					4	Extra radium volume collected for Lab QAIQC
MGWC-12	11/16/16	13:35	G	W	N					3	
DUP-1	11/16/16	-	G	W	N					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 - AsHClO2
 P - Na2SO4S
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP Dodecahydrate
 U - Acetone
 V - MCAA
 W - pH 4-5
 X - EDTA
 Y - other (specify)

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: Please also provide results to Maria Padilla and Heath McConkirk

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: Will Vise
 Relinquished by: Joju Abraham
 Relinquished by: _____
 Custody Seals Intact: Yes No
 Custody Seal No.: 746074
 Cooler Temperature (°C) and other Remarks: 5.0°C, 4.6°C IRS
 Date/Time: 11/17/16
 Date/Time: 11/18/16 8:33
 Date/Time: _____
 Company: ERM
 Company: JTA
 Company: JTA
 Company: 10336
 Company: JTA
 Company: JTA

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

Chain of Custody Record

TestAmerica
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681-Atlanta

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: CCR - Plant McIntosh Site: AP		Lab PVI: Whitmire, Cheyenne R E-Mail: cheyenne.whitmire@testamericainc.com Due Date Requested: TAT Requested (days): PO #: WO #: Project #: SSO#:#		Sampler: TP ERM - T. Payne, M. Thomas, C. Hurdle, Tracy Wardell, W. Virgo Phone: 878-486-2700		Carrier Tracking No(s): Page: 2 of 2 Job #:	
Analysis Requested Metals Appendix III & IV - EPA 6020 & EPA 7470 Radium 226 & 228 - SW-846 9315 & 9320 TPS - SM 2540C - Cl.F.S04 - EPA 300 Field Filtered Sample (Yes or No)		Analysis Requested Preservation Codes: A - HCl B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		Total Number of Containers: 5 Special Instructions/Note:		Preservation Codes: M - Hexane N - None O - AshtAO2 P - Na2SO4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Z - other (specify)	
Sample Identification Sample Date: 11/16/16 Sample Time: 13:20 Matrix: W Sample Type (C-Comp, G-Grab): G Sample Date: 11/16/16 Sample Time: 13:25 Matrix: W		Sample Date: 11/16/16 Sample Time: 13:20 Matrix: W Sample Type (C-Comp, G-Grab): G Sample Date: 11/16/16 Sample Time: 13:25 Matrix: W		Sample Disposal (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 Special Instructions/QC Requirements: Please also provide results to Maria Padilla and Heath McCorkle		Sample Disposal (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 Special Instructions/QC Requirements: Please also provide results to Maria Padilla and Heath McCorkle	
Possible Hazard Identification <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)		Possible Hazard Identification <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)		Empty Kit Relinquished by: _____ Date: _____ Relinquished by: Will Virgo Date/Time: 11/17/16 10:36 Company: ERM Relinquished by: _____ Date/Time: 11/17/16 14:00 Company: TAA Relinquished by: _____ Date/Time: 11/18/16 8:33 Company: JH Custody Seal No.: 746074 Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cooler Temperature(s) °C and Other Remarks: 5.0°C, 4.6°C IRS		Empty Kit Relinquished by: _____ Date: _____ Relinquished by: _____ Date/Time: 11/17/16 10:36 Company: ERM Relinquished by: _____ Date/Time: 11/17/16 14:00 Company: TAA Relinquished by: _____ Date/Time: 11/18/16 8:33 Company: JH Custody Seal No.: 746074 Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cooler Temperature(s) °C and Other Remarks: 5.0°C, 4.6°C IRS	



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-130328-2

SDG Number: AP

Login Number: 130328

List Number: 1

Creator: Hughes, Nicholas T

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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	4.6°C, 5.0°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 McIntosh

TestAmerica Job ID: 400-130328-2
 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	01-11-18
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 McIntosh

TestAmerica Job ID: 400-130328-2
SDG: AP

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: 400-132731-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR - Plant McIntosh


For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

2/21/2017 4:59:54 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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

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

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Certification Summary	45

Case Narrative

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Job ID: 400-132731-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-132731-1

HPLC/IC

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MGWC-7 (400-132731-4), DUP-1 (400-132731-5), MGWC-8 (400-132731-6), MGWC-3 (400-132731-7), MGWC-2 (400-132731-9) and MGWC-1 (400-132731-13). 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: MGWA-6 (400-132731-3), MGWC-3 (400-132731-7), MGWC-2 (400-132731-9) and MGWC-1 (400-132731-13). Elevated reporting limits (RLs) are provided.

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 339670 and analytical batch 339805 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 precision (RPD) for the following sample associated with preparation batch 339670 and analytical batch 339805 was outside control limits: (400-132731-C-9-C MSD).



Detection Summary

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Client Sample ID: MGWA-11

Lab Sample ID: 400-132731-1

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
Fluoride	0.11	J	0.20	0.082	mg/L	1		300.0	Total/NA
Barium	0.11		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	34		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.020		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0011	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	170		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWA-5

Lab Sample ID: 400-132731-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.7		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	6.7		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	29		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.010		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	140		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWA-6

Lab Sample ID: 400-132731-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.4		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	19		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.022		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.051		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.17		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium - DL	100		0.50	0.25	mg/L	10		6020	Total Recoverable
Total Dissolved Solids	310		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-7

Lab Sample ID: 400-132731-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		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	180		5.0	3.5	mg/L	5		300.0	Total/NA
Barium	0.014		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.3		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	52		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 McIntosh

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Client Sample ID: MGWC-7 (Continued)

Lab Sample ID: 400-132731-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.0099		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.14		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	310		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-1

Lab Sample ID: 400-132731-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.29		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	0.014		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.3		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	53		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0099		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.13		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	310		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-8

Lab Sample ID: 400-132731-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	150		5.0	3.5	mg/L	5		300.0	Total/NA
Barium	0.038		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00084	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Boron	1.6		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	32		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0051		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.032		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Thallium	0.00016	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Mercury	0.000076	J	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	240		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-3

Lab Sample ID: 400-132731-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.086	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	100		5.0	3.5	mg/L	5		300.0	Total/NA
Arsenic	0.00056	J	0.0013	0.00046	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 McIntosh

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Client Sample ID: MGWC-3 (Continued)

Lab Sample ID: 400-132731-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.16		0.0025	0.00049	mg/L	5		6020	Total
Boron	1.3		0.050	0.021	mg/L	5		6020	Total Recoverable
Cobalt	0.00051	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.014		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Calcium - DL	100		0.50	0.25	mg/L	10		6020	Total Recoverable
Total Dissolved Solids	380		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWA-10

Lab Sample ID: 400-132731-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.7		1.0	0.89	mg/L	1		300.0	Total/NA
Barium	0.022		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	3.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0029		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0076		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	36		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-2

Lab Sample ID: 400-132731-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	18		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	280		10	7.0	mg/L	10		300.0	Total/NA
Barium	0.060		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.0080		0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cobalt	0.0032		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0051		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Boron - DL	3.7		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	130		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	630		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-12

Lab Sample ID: 400-132731-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.2		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	4.1		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00096	J	0.0013	0.00046	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 McIntosh

TestAmerica Job ID: 400-132731-1
 SDG: Ash Pond

Client Sample ID: MGWC-12 (Continued)

Lab Sample ID: 400-132731-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.056		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.097		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	32		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.015		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	180		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-1

Lab Sample ID: 400-132731-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.038	J	0.050	0.021	mg/L	5		6020	Total Recoverable

Client Sample ID: FERB-1

Lab Sample ID: 400-132731-12

No Detections.

Client Sample ID: MGWC-1

Lab Sample ID: 400-132731-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.22		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	160		10	7.0	mg/L	10		300.0	Total/NA
Arsenic	0.0024		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.12		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cobalt	0.00040	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.011		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0011	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Boron - DL	1.5		0.10	0.042	mg/L	10		6020	Total Recoverable
Calcium - DL	110		0.50	0.25	mg/L	10		6020	Total Recoverable
Total Dissolved Solids	400		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 McIntosh

TestAmerica Job ID: 400-132731-1
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 McIntosh

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132731-1	MGWA-11	Water	01/17/17 09:47	01/18/17 08:30
400-132731-2	MGWA-5	Water	01/17/17 11:14	01/18/17 08:30
400-132731-3	MGWA-6	Water	01/17/17 12:43	01/18/17 08:30
400-132731-4	MGWC-7	Water	01/17/17 13:05	01/18/17 08:30
400-132731-5	DUP-1	Water	01/17/17 00:00	01/18/17 08:30
400-132731-6	MGWC-8	Water	01/17/17 14:14	01/18/17 08:30
400-132731-7	MGWC-3	Water	01/17/17 15:58	01/18/17 08:30
400-132731-8	MGWA-10	Water	01/16/17 15:30	01/18/17 15:31
400-132731-9	MGWC-2	Water	01/18/17 09:05	01/19/17 07:45
400-132731-10	MGWC-12	Water	01/18/17 10:47	01/19/17 07:45
400-132731-11	FB-1	Water	01/18/17 11:25	01/19/17 07:45
400-132731-12	FERB-1	Water	01/18/17 11:35	01/19/17 07:45
400-132731-13	MGWC-1	Water	01/19/17 09:25	01/20/17 13:45

Client Sample Results

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

TestAmerica Job ID: 400-132731-1
 SDG: Ash Pond

Client Sample ID: MGWA-11

Date Collected: 01/17/17 09:47

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-1

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.9		1.0	0.89	mg/L			01/21/17 05:27	1
Fluoride	0.11	J	0.20	0.082	mg/L			01/21/17 05:27	1
Sulfate	<0.70		1.0	0.70	mg/L			01/21/17 05:27	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		01/20/17 13:45	01/24/17 14:41	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/20/17 13:45	01/24/17 14:41	5
Barium	0.11		0.0025	0.00049	mg/L		01/20/17 13:45	01/24/17 14:41	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 14:41	5
Boron	<0.021		0.050	0.021	mg/L		01/20/17 13:45	01/24/17 14:41	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 14:41	5
Calcium	34		0.25	0.13	mg/L		01/20/17 13:45	01/24/17 14:41	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/20/17 13:45	01/24/17 14:41	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/20/17 13:45	01/24/17 14:41	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/20/17 13:45	01/24/17 14:41	5
Lithium	0.020		0.0050	0.0032	mg/L		01/20/17 13:45	01/24/17 14:41	5
Molybdenum	0.0011	J	0.015	0.00085	mg/L		01/20/17 13:45	01/24/17 14:41	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/20/17 13:45	01/24/17 14:41	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/20/17 13:45	01/24/17 14:41	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		01/23/17 14:53	01/25/17 13:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	170		5.0	3.4	mg/L			01/21/17 14:05	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Client Sample ID: MGWA-5

Date Collected: 01/17/17 11:14

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-2

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.7		1.0	0.89	mg/L			01/21/17 06:35	1
Fluoride	0.095	J	0.20	0.082	mg/L			01/21/17 06:35	1
Sulfate	6.7		1.0	0.70	mg/L			01/21/17 06:35	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		01/20/17 13:45	01/24/17 14:45	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/20/17 13:45	01/24/17 14:45	5
Barium	0.039		0.0025	0.00049	mg/L		01/20/17 13:45	01/24/17 14:45	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 14:45	5
Boron	<0.021		0.050	0.021	mg/L		01/20/17 13:45	01/24/17 14:45	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 14:45	5
Calcium	29		0.25	0.13	mg/L		01/20/17 13:45	01/24/17 14:45	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/20/17 13:45	01/24/17 14:45	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/20/17 13:45	01/24/17 14:45	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/20/17 13:45	01/24/17 14:45	5
Lithium	0.010		0.0050	0.0032	mg/L		01/20/17 13:45	01/24/17 14:45	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/20/17 13:45	01/24/17 14:45	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/20/17 13:45	01/24/17 14:45	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/20/17 13:45	01/24/17 14:45	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		01/23/17 14:53	01/25/17 13:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	140		5.0	3.4	mg/L			01/21/17 14:05	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Client Sample ID: MGWA-6

Lab Sample ID: 400-132731-3

Date Collected: 01/17/17 12:43

Matrix: Water

Date Received: 01/18/17 08:30

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.4		1.0	0.89	mg/L			01/21/17 06:58	1
Fluoride	0.099	J	0.20	0.082	mg/L			01/21/17 06:58	1
Sulfate	19		1.0	0.70	mg/L			01/21/17 06:58	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		01/20/17 13:45	01/24/17 14:50	5
Arsenic	0.022		0.0013	0.00046	mg/L		01/20/17 13:45	01/24/17 14:50	5
Barium	0.051		0.0025	0.00049	mg/L		01/20/17 13:45	01/24/17 14:50	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 14:50	5
Boron	0.17		0.050	0.021	mg/L		01/20/17 13:45	01/24/17 14:50	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 14:50	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/20/17 13:45	01/24/17 14:50	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/20/17 13:45	01/24/17 14:50	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/20/17 13:45	01/24/17 14:50	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/20/17 13:45	01/24/17 14:50	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/20/17 13:45	01/24/17 14:50	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/20/17 13:45	01/24/17 14:50	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/20/17 13:45	01/24/17 14:50	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	100		0.50	0.25	mg/L		01/20/17 13:45	01/24/17 15:48	10

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/23/17 14:53	01/25/17 13:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	310		5.0	3.4	mg/L			01/21/17 14:05	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Client Sample ID: MGWC-7

Date Collected: 01/17/17 13:05

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-4

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		1.0	0.89	mg/L			01/21/17 07:21	1
Fluoride	0.20		0.20	0.082	mg/L			01/21/17 07:21	1
Sulfate	180		5.0	3.5	mg/L			01/26/17 22:47	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		01/20/17 13:45	01/24/17 14:54	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/20/17 13:45	01/24/17 14:54	5
Barium	0.014		0.0025	0.00049	mg/L		01/20/17 13:45	01/24/17 14:54	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 14:54	5
Boron	1.3		0.050	0.021	mg/L		01/20/17 13:45	01/24/17 14:54	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 14:54	5
Calcium	52		0.25	0.13	mg/L		01/20/17 13:45	01/24/17 14:54	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/20/17 13:45	01/24/17 14:54	5
Cobalt	0.0099		0.0025	0.00040	mg/L		01/20/17 13:45	01/24/17 14:54	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/20/17 13:45	01/24/17 14:54	5
Lithium	0.14		0.0050	0.0032	mg/L		01/20/17 13:45	01/24/17 14:54	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/20/17 13:45	01/24/17 14:54	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/20/17 13:45	01/24/17 14:54	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/20/17 13:45	01/24/17 14:54	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		01/23/17 14:53	01/25/17 13:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	310		5.0	3.4	mg/L			01/21/17 14:05	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Client Sample ID: DUP-1
Date Collected: 01/17/17 00:00
Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-5
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		1.0	0.89	mg/L			01/21/17 07:44	1
Fluoride	0.29		0.20	0.082	mg/L			01/21/17 07:44	1
Sulfate	180		5.0	3.5	mg/L			01/26/17 23:10	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		01/20/17 13:45	01/24/17 14:59	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/20/17 13:45	01/24/17 14:59	5
Barium	0.014		0.0025	0.00049	mg/L		01/20/17 13:45	01/24/17 14:59	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 14:59	5
Boron	1.3		0.050	0.021	mg/L		01/20/17 13:45	01/24/17 14:59	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 14:59	5
Calcium	53		0.25	0.13	mg/L		01/20/17 13:45	01/24/17 14:59	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/20/17 13:45	01/24/17 14:59	5
Cobalt	0.0099		0.0025	0.00040	mg/L		01/20/17 13:45	01/24/17 14:59	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/20/17 13:45	01/24/17 14:59	5
Lithium	0.13		0.0050	0.0032	mg/L		01/20/17 13:45	01/24/17 14:59	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/20/17 13:45	01/24/17 14:59	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/20/17 13:45	01/24/17 14:59	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/20/17 13:45	01/24/17 14:59	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		01/23/17 14:53	01/25/17 13:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	310		5.0	3.4	mg/L			01/21/17 14:05	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Client Sample ID: MGWC-8

Date Collected: 01/17/17 14:14

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-6

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10		1.0	0.89	mg/L			01/23/17 18:30	1
Fluoride	<0.082		0.20	0.082	mg/L			01/23/17 18:30	1
Sulfate	150		5.0	3.5	mg/L			01/26/17 21:16	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		01/20/17 13:45	01/24/17 15:03	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/20/17 13:45	01/24/17 15:03	5
Barium	0.038		0.0025	0.00049	mg/L		01/20/17 13:45	01/24/17 15:03	5
Beryllium	0.00084	J	0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 15:03	5
Boron	1.6		0.050	0.021	mg/L		01/20/17 13:45	01/24/17 15:03	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 15:03	5
Calcium	32		0.25	0.13	mg/L		01/20/17 13:45	01/24/17 15:03	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/20/17 13:45	01/24/17 15:03	5
Cobalt	0.0051		0.0025	0.00040	mg/L		01/20/17 13:45	01/24/17 15:03	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/20/17 13:45	01/24/17 15:03	5
Lithium	0.032		0.0050	0.0032	mg/L		01/20/17 13:45	01/24/17 15:03	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/20/17 13:45	01/24/17 15:03	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/20/17 13:45	01/24/17 15:03	5
Thallium	0.00016	J	0.00050	0.000085	mg/L		01/20/17 13:45	01/24/17 15:03	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000076	J	0.00020	0.000070	mg/L		01/23/17 14:53	01/25/17 13:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	240		5.0	3.4	mg/L			01/21/17 14:05	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Client Sample ID: MGWC-3

Lab Sample ID: 400-132731-7

Date Collected: 01/17/17 15:58

Matrix: Water

Date Received: 01/18/17 08:30

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14		1.0	0.89	mg/L			01/23/17 18:53	1
Fluoride	0.086	J	0.20	0.082	mg/L			01/23/17 18:53	1
Sulfate	100		5.0	3.5	mg/L			01/26/17 22:24	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		01/20/17 13:45	01/24/17 15:30	5
Arsenic	0.00056	J	0.0013	0.00046	mg/L		01/20/17 13:45	01/24/17 15:30	5
Barium	0.16		0.0025	0.00049	mg/L		01/20/17 13:45	01/24/17 15:30	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 15:30	5
Boron	1.3		0.050	0.021	mg/L		01/20/17 13:45	01/24/17 15:30	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 15:30	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/20/17 13:45	01/24/17 15:30	5
Cobalt	0.00051	J	0.0025	0.00040	mg/L		01/20/17 13:45	01/24/17 15:30	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/20/17 13:45	01/24/17 15:30	5
Lithium	0.014		0.0050	0.0032	mg/L		01/20/17 13:45	01/24/17 15:30	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/20/17 13:45	01/24/17 15:30	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/20/17 13:45	01/24/17 15:30	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/20/17 13:45	01/24/17 15:30	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	100		0.50	0.25	mg/L		01/20/17 13:45	01/25/17 14:30	10

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		01/23/17 14:53	01/25/17 13:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	380		5.0	3.4	mg/L			01/21/17 14:05	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Client Sample ID: MGWA-10

Date Collected: 01/16/17 15:30

Date Received: 01/18/17 15:31

Lab Sample ID: 400-132731-8

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.7		1.0	0.89	mg/L			01/23/17 19:15	1
Fluoride	<0.082		0.20	0.082	mg/L			01/23/17 19:15	1
Sulfate	<0.70		1.0	0.70	mg/L			01/23/17 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		01/20/17 13:45	01/24/17 15:35	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/20/17 13:45	01/24/17 15:35	5
Barium	0.022		0.0025	0.00049	mg/L		01/20/17 13:45	01/24/17 15:35	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 15:35	5
Boron	0.021	J	0.050	0.021	mg/L		01/20/17 13:45	01/24/17 15:35	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 15:35	5
Calcium	3.8		0.25	0.13	mg/L		01/20/17 13:45	01/24/17 15:35	5
Chromium	0.0029		0.0025	0.0011	mg/L		01/20/17 13:45	01/24/17 15:35	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/20/17 13:45	01/24/17 15:35	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/20/17 13:45	01/24/17 15:35	5
Lithium	0.0076		0.0050	0.0032	mg/L		01/20/17 13:45	01/24/17 15:35	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/20/17 13:45	01/24/17 15:35	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/20/17 13:45	01/24/17 15:35	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/20/17 13:45	01/24/17 15:35	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		01/23/17 14:53	01/25/17 13:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	36		5.0	3.4	mg/L			01/21/17 14:05	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Client Sample ID: MGWC-2

Lab Sample ID: 400-132731-9

Date Collected: 01/18/17 09:05

Matrix: Water

Date Received: 01/19/17 07:45

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18		1.0	0.89	mg/L			01/27/17 20:11	1
Fluoride	<0.082		0.20	0.082	mg/L			01/27/17 20:11	1
Sulfate	280		10	7.0	mg/L			01/31/17 00:32	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		01/25/17 08:40	01/25/17 15:11	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/25/17 08:40	01/25/17 15:11	5
Barium	0.060		0.0025	0.00049	mg/L		01/25/17 08:40	01/25/17 15:11	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 15:11	5
Cadmium	0.0080		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 15:11	5
Chromium	<0.0011	F2 F1	0.0025	0.0011	mg/L		01/25/17 08:40	01/25/17 15:11	5
Cobalt	0.0032		0.0025	0.00040	mg/L		01/25/17 08:40	01/25/17 15:11	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/25/17 08:40	01/25/17 15:11	5
Lithium	0.0051		0.0050	0.0032	mg/L		01/25/17 08:40	01/25/17 15:11	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/25/17 08:40	01/25/17 15:11	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/25/17 08:40	01/25/17 15:11	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/25/17 08:40	01/25/17 15:11	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.7		0.25	0.11	mg/L		01/25/17 08:40	01/25/17 16:09	25
Calcium	130		1.3	0.63	mg/L		01/25/17 08:40	01/25/17 16:09	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		01/25/17 09:17	01/27/17 12:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	630		5.0	3.4	mg/L			01/24/17 14:35	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Client Sample ID: MGWC-12

Date Collected: 01/18/17 10:47

Date Received: 01/19/17 07:45

Lab Sample ID: 400-132731-10

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.2		1.0	0.89	mg/L			01/27/17 20:34	1
Fluoride	0.26		0.20	0.082	mg/L			01/27/17 20:34	1
Sulfate	4.1		1.0	0.70	mg/L			01/27/17 20:34	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		01/25/17 08:40	01/25/17 15:51	5
Arsenic	0.00096	J	0.0013	0.00046	mg/L		01/25/17 08:40	01/25/17 15:51	5
Barium	0.056		0.0025	0.00049	mg/L		01/25/17 08:40	01/25/17 15:51	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 15:51	5
Boron	0.097		0.050	0.021	mg/L		01/25/17 08:40	01/25/17 15:51	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 15:51	5
Calcium	32		0.25	0.13	mg/L		01/25/17 08:40	01/25/17 15:51	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/25/17 08:40	01/25/17 15:51	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/25/17 08:40	01/25/17 15:51	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/25/17 08:40	01/25/17 15:51	5
Lithium	0.015		0.0050	0.0032	mg/L		01/25/17 08:40	01/25/17 15:51	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/25/17 08:40	01/25/17 15:51	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/25/17 08:40	01/25/17 15:51	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/25/17 08:40	01/25/17 15:51	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		01/25/17 09:17	01/27/17 12:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	180		5.0	3.4	mg/L			01/24/17 14:35	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Client Sample ID: FB-1

Date Collected: 01/18/17 11:25

Date Received: 01/19/17 07:45

Lab Sample ID: 400-132731-11

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 20:57	1
Fluoride	<0.082		0.20	0.082	mg/L			01/27/17 20:57	1
Sulfate	<0.70		1.0	0.70	mg/L			01/27/17 20:57	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		01/25/17 08:40	01/25/17 15:56	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/25/17 08:40	01/25/17 15:56	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/25/17 08:40	01/25/17 15:56	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 15:56	5
Boron	0.038	J	0.050	0.021	mg/L		01/25/17 08:40	01/25/17 15:56	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 15:56	5
Calcium	<0.13		0.25	0.13	mg/L		01/25/17 08:40	01/25/17 15:56	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/25/17 08:40	01/25/17 15:56	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/25/17 08:40	01/25/17 15:56	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/25/17 08:40	01/25/17 15:56	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/25/17 08:40	01/25/17 15:56	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/25/17 08:40	01/25/17 15:56	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/25/17 08:40	01/25/17 15:56	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/25/17 08:40	01/25/17 15:56	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 09:17	01/27/17 12:42	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 14:35	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Client Sample ID: FERB-1

Date Collected: 01/18/17 11:35

Date Received: 01/19/17 07:45

Lab Sample ID: 400-132731-12

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			01/27/17 21:20	1
Fluoride	<0.082		0.20	0.082	mg/L			01/27/17 21:20	1
Sulfate	<0.70		1.0	0.70	mg/L			01/27/17 21:20	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		01/25/17 08:40	01/25/17 16:00	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/25/17 08:40	01/25/17 16:00	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/25/17 08:40	01/25/17 16:00	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 16:00	5
Boron	<0.021		0.050	0.021	mg/L		01/25/17 08:40	01/25/17 16:00	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 16:00	5
Calcium	<0.13		0.25	0.13	mg/L		01/25/17 08:40	01/25/17 16:00	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/25/17 08:40	01/25/17 16:00	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/25/17 08:40	01/25/17 16:00	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/25/17 08:40	01/25/17 16:00	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/25/17 08:40	01/25/17 16:00	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/25/17 08:40	01/25/17 16:00	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/25/17 08:40	01/25/17 16:00	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/25/17 08:40	01/25/17 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		01/25/17 09:17	01/27/17 12:56	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			01/24/17 14:35	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Client Sample ID: MGWC-1

Lab Sample ID: 400-132731-13

Date Collected: 01/19/17 09:25

Matrix: Water

Date Received: 01/20/17 13:45

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14		1.0	0.89	mg/L			01/27/17 21:43	1
Fluoride	0.22		0.20	0.082	mg/L			01/27/17 21:43	1
Sulfate	160		10	7.0	mg/L			01/31/17 01:40	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		01/25/17 08:40	01/25/17 16:05	5
Arsenic	0.0024		0.0013	0.00046	mg/L		01/25/17 08:40	01/25/17 16:05	5
Barium	0.12		0.0025	0.00049	mg/L		01/25/17 08:40	01/25/17 16:05	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 16:05	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 16:05	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/25/17 08:40	01/25/17 16:05	5
Cobalt	0.00040	J	0.0025	0.00040	mg/L		01/25/17 08:40	01/25/17 16:05	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/25/17 08:40	01/25/17 16:05	5
Lithium	0.011		0.0050	0.0032	mg/L		01/25/17 08:40	01/25/17 16:05	5
Molybdenum	0.0011	J	0.015	0.00085	mg/L		01/25/17 08:40	01/25/17 16:05	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/25/17 08:40	01/25/17 16:05	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/25/17 08:40	01/25/17 16:05	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.5		0.10	0.042	mg/L		01/25/17 08:40	01/25/17 16:14	10
Calcium	110		0.50	0.25	mg/L		01/25/17 08:40	01/25/17 16:14	10

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 09:17	01/27/17 12:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	400		5.0	3.4	mg/L			01/24/17 14:35	1

Definitions/Glossary

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

TestAmerica Job ID: 400-132731-1
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.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

Glossary

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Client Sample ID: MGWA-11

Date Collected: 01/17/17 09:47

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339381	01/21/17 05:27	KH1	TAL PEN
Total Recoverable	Prep	3005A			339178	01/20/17 13:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339677	01/24/17 14:41	RJB	TAL PEN
Total/NA	Prep	7470A			339472	01/23/17 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339753	01/25/17 13:26	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339296	01/21/17 14:05	TET	TAL PEN

Client Sample ID: MGWA-5

Date Collected: 01/17/17 11:14

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339381	01/21/17 06:35	KH1	TAL PEN
Total Recoverable	Prep	3005A			339178	01/20/17 13:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339677	01/24/17 14:45	RJB	TAL PEN
Total/NA	Prep	7470A			339472	01/23/17 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339753	01/25/17 13:27	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339296	01/21/17 14:05	TET	TAL PEN

Client Sample ID: MGWA-6

Date Collected: 01/17/17 12:43

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339381	01/21/17 06:58	KH1	TAL PEN
Total Recoverable	Prep	3005A			339178	01/20/17 13:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339677	01/24/17 14:50	RJB	TAL PEN
Total Recoverable	Prep	3005A	DL		339178	01/20/17 13:45	RJB	TAL PEN
Total Recoverable	Analysis	6020	DL	10	339677	01/24/17 15:48	RJB	TAL PEN
Total/NA	Prep	7470A			339472	01/23/17 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339753	01/25/17 13:29	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339296	01/21/17 14:05	TET	TAL PEN

Client Sample ID: MGWC-7

Date Collected: 01/17/17 13:05

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339381	01/21/17 07:21	KH1	TAL PEN
Total/NA	Analysis	300.0		5	340093	01/26/17 22:47	KH1	TAL PEN
Total Recoverable	Prep	3005A			339178	01/20/17 13:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339677	01/24/17 14:54	RJB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Client Sample ID: MGWC-7

Date Collected: 01/17/17 13:05

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			339472	01/23/17 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339753	01/25/17 13:44	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: 01/18/17 08:30

Lab Sample ID: 400-132731-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339381	01/21/17 07:44	KH1	TAL PEN
Total/NA	Analysis	300.0		5	340093	01/26/17 23:10	KH1	TAL PEN
Total Recoverable	Prep	3005A			339178	01/20/17 13:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339677	01/24/17 14:59	RJB	TAL PEN
Total/NA	Prep	7470A			339472	01/23/17 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339753	01/25/17 13:45	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339296	01/21/17 14:05	TET	TAL PEN

Client Sample ID: MGWC-8

Date Collected: 01/17/17 14:14

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339461	01/23/17 18:30	KH1	TAL PEN
Total/NA	Analysis	300.0		5	340093	01/26/17 21:16	KH1	TAL PEN
Total Recoverable	Prep	3005A			339178	01/20/17 13:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339677	01/24/17 15:03	RJB	TAL PEN
Total/NA	Prep	7470A			339472	01/23/17 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339753	01/25/17 13:47	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339296	01/21/17 14:05	TET	TAL PEN

Client Sample ID: MGWC-3

Date Collected: 01/17/17 15:58

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339461	01/23/17 18:53	KH1	TAL PEN
Total/NA	Analysis	300.0		5	340093	01/26/17 22:24	KH1	TAL PEN
Total Recoverable	Prep	3005A			339178	01/20/17 13:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339677	01/24/17 15:30	RJB	TAL PEN
Total Recoverable	Prep	3005A	DL		339178	01/20/17 13:45	RJB	TAL PEN
Total Recoverable	Analysis	6020	DL	10	339805	01/25/17 14:30	DRE	TAL PEN
Total/NA	Prep	7470A			339472	01/23/17 14:53	JAP	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Client Sample ID: MGWC-3

Date Collected: 01/17/17 15:58

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7470A		1	339753	01/25/17 13:48	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339296	01/21/17 14:05	TET	TAL PEN

Client Sample ID: MGWA-10

Date Collected: 01/16/17 15:30

Date Received: 01/18/17 15:31

Lab Sample ID: 400-132731-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	339461	01/23/17 19:15	KH1	TAL PEN
Total Recoverable	Prep	3005A			339178	01/20/17 13:45	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339677	01/24/17 15:35	RJB	TAL PEN
Total/NA	Prep	7470A			339472	01/23/17 14:53	JAP	TAL PEN
Total/NA	Analysis	7470A		1	339753	01/25/17 13:49	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339296	01/21/17 14:05	TET	TAL PEN

Client Sample ID: MGWC-2

Date Collected: 01/18/17 09:05

Date Received: 01/19/17 07:45

Lab Sample ID: 400-132731-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340258	01/27/17 20:11	KH1	TAL PEN
Total/NA	Analysis	300.0		10	340336	01/31/17 00:32	KH1	TAL PEN
Total Recoverable	Prep	3005A			339670	01/25/17 08:40	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339805	01/25/17 15:11	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		339670	01/25/17 08:40	RJB	TAL PEN
Total Recoverable	Analysis	6020	DL	25	339805	01/25/17 16:09	DRE	TAL PEN
Total/NA	Prep	7470A			339694	01/25/17 09:17	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340132	01/27/17 12:36	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339614	01/24/17 14:35	TET	TAL PEN

Client Sample ID: MGWC-12

Date Collected: 01/18/17 10:47

Date Received: 01/19/17 07:45

Lab Sample ID: 400-132731-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340258	01/27/17 20:34	KH1	TAL PEN
Total Recoverable	Prep	3005A			339670	01/25/17 08:40	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339805	01/25/17 15:51	DRE	TAL PEN
Total/NA	Prep	7470A			339694	01/25/17 09:17	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340132	01/27/17 12:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339614	01/24/17 14:35	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Client Sample ID: FB-1

Lab Sample ID: 400-132731-11

Date Collected: 01/18/17 11:25

Matrix: Water

Date Received: 01/19/17 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340258	01/27/17 20:57	KH1	TAL PEN
Total Recoverable	Prep	3005A			339670	01/25/17 08:40	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339805	01/25/17 15:56	DRE	TAL PEN
Total/NA	Prep	7470A			339694	01/25/17 09:17	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340132	01/27/17 12:42	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339614	01/24/17 14:35	TET	TAL PEN

Client Sample ID: FERB-1

Lab Sample ID: 400-132731-12

Date Collected: 01/18/17 11:35

Matrix: Water

Date Received: 01/19/17 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340258	01/27/17 21:20	KH1	TAL PEN
Total Recoverable	Prep	3005A			339670	01/25/17 08:40	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339805	01/25/17 16:00	DRE	TAL PEN
Total/NA	Prep	7470A			339694	01/25/17 09:17	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340132	01/27/17 12:56	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339614	01/24/17 14:35	TET	TAL PEN

Client Sample ID: MGWC-1

Lab Sample ID: 400-132731-13

Date Collected: 01/19/17 09:25

Matrix: Water

Date Received: 01/20/17 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	340258	01/27/17 21:43	KH1	TAL PEN
Total/NA	Analysis	300.0		10	340336	01/31/17 01:40	KH1	TAL PEN
Total Recoverable	Prep	3005A			339670	01/25/17 08:40	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	339805	01/25/17 16:05	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		339670	01/25/17 08:40	RJB	TAL PEN
Total Recoverable	Analysis	6020	DL	10	339805	01/25/17 16:14	DRE	TAL PEN
Total/NA	Prep	7470A			339694	01/25/17 09:17	JAP	TAL PEN
Total/NA	Analysis	7470A		1	340132	01/27/17 12:57	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	339614	01/24/17 14:35	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 McIntosh

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

HPLC/IC

Analysis Batch: 339381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132731-1	MGWA-11	Total/NA	Water	300.0	
400-132731-2	MGWA-5	Total/NA	Water	300.0	
400-132731-3	MGWA-6	Total/NA	Water	300.0	
400-132731-4	MGWC-7	Total/NA	Water	300.0	
400-132731-5	DUP-1	Total/NA	Water	300.0	
MB 400-339381/4	Method Blank	Total/NA	Water	300.0	
LCS 400-339381/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-339381/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-132731-1 MS	MGWA-11	Total/NA	Water	300.0	
400-132731-1 MSD	MGWA-11	Total/NA	Water	300.0	

Analysis Batch: 339461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132731-6	MGWC-8	Total/NA	Water	300.0	
400-132731-7	MGWC-3	Total/NA	Water	300.0	
400-132731-8	MGWA-10	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	

Analysis Batch: 340093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132731-4	MGWC-7	Total/NA	Water	300.0	
400-132731-5	DUP-1	Total/NA	Water	300.0	
400-132731-6	MGWC-8	Total/NA	Water	300.0	
400-132731-7	MGWC-3	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	
400-132731-6 MS	MGWC-8	Total/NA	Water	300.0	
400-132731-6 MSD	MGWC-8	Total/NA	Water	300.0	

Analysis Batch: 340258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132731-9	MGWC-2	Total/NA	Water	300.0	
400-132731-10	MGWC-12	Total/NA	Water	300.0	
400-132731-11	FB-1	Total/NA	Water	300.0	
400-132731-12	FERB-1	Total/NA	Water	300.0	
400-132731-13	MGWC-1	Total/NA	Water	300.0	
MB 400-340258/4	Method Blank	Total/NA	Water	300.0	
LCS 400-340258/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-340258/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-132731-13 MS	MGWC-1	Total/NA	Water	300.0	
400-132731-13 MSD	MGWC-1	Total/NA	Water	300.0	

Analysis Batch: 340336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132731-9	MGWC-2	Total/NA	Water	300.0	
400-132731-13	MGWC-1	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	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

HPLC/IC (Continued)

Analysis Batch: 340336 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 400-340336/36	Lab Control Sample Dup	Total/NA	Water	300.0	
400-132731-9 MS	MGWC-2	Total/NA	Water	300.0	
400-132731-9 MSD	MGWC-2	Total/NA	Water	300.0	

Metals

Prep Batch: 339178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132731-1	MGWA-11	Total Recoverable	Water	3005A	
400-132731-2	MGWA-5	Total Recoverable	Water	3005A	
400-132731-3	MGWA-6	Total Recoverable	Water	3005A	
400-132731-3 - DL	MGWA-6	Total Recoverable	Water	3005A	
400-132731-4	MGWC-7	Total Recoverable	Water	3005A	
400-132731-5	DUP-1	Total Recoverable	Water	3005A	
400-132731-6	MGWC-8	Total Recoverable	Water	3005A	
400-132731-7 - DL	MGWC-3	Total Recoverable	Water	3005A	
400-132731-7	MGWC-3	Total Recoverable	Water	3005A	
400-132731-8	MGWA-10	Total Recoverable	Water	3005A	
MB 400-339178/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-339178/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 339472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132731-1	MGWA-11	Total/NA	Water	7470A	
400-132731-2	MGWA-5	Total/NA	Water	7470A	
400-132731-3	MGWA-6	Total/NA	Water	7470A	
400-132731-4	MGWC-7	Total/NA	Water	7470A	
400-132731-5	DUP-1	Total/NA	Water	7470A	
400-132731-6	MGWC-8	Total/NA	Water	7470A	
400-132731-7	MGWC-3	Total/NA	Water	7470A	
400-132731-8	MGWA-10	Total/NA	Water	7470A	
MB 400-339472/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-339472/15-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 339670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132731-9 - DL	MGWC-2	Total Recoverable	Water	3005A	
400-132731-9	MGWC-2	Total Recoverable	Water	3005A	
400-132731-10	MGWC-12	Total Recoverable	Water	3005A	
400-132731-11	FB-1	Total Recoverable	Water	3005A	
400-132731-12	FERB-1	Total Recoverable	Water	3005A	
400-132731-13 - DL	MGWC-1	Total Recoverable	Water	3005A	
400-132731-13	MGWC-1	Total Recoverable	Water	3005A	
MB 400-339670/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-339670/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-132731-9 MS	MGWC-2	Total Recoverable	Water	3005A	
400-132731-9 MSD	MGWC-2	Total Recoverable	Water	3005A	

QC Association Summary

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Metals (Continued)

Analysis Batch: 339677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132731-1	MGWA-11	Total Recoverable	Water	6020	339178
400-132731-2	MGWA-5	Total Recoverable	Water	6020	339178
400-132731-3	MGWA-6	Total Recoverable	Water	6020	339178
400-132731-3 - DL	MGWA-6	Total Recoverable	Water	6020	339178
400-132731-4	MGWC-7	Total Recoverable	Water	6020	339178
400-132731-5	DUP-1	Total Recoverable	Water	6020	339178
400-132731-6	MGWC-8	Total Recoverable	Water	6020	339178
400-132731-7	MGWC-3	Total Recoverable	Water	6020	339178
400-132731-8	MGWA-10	Total Recoverable	Water	6020	339178
MB 400-339178/1-A ^5	Method Blank	Total Recoverable	Water	6020	339178
LCS 400-339178/2-A	Lab Control Sample	Total Recoverable	Water	6020	339178

Prep Batch: 339694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132731-9	MGWC-2	Total/NA	Water	7470A	
400-132731-10	MGWC-12	Total/NA	Water	7470A	
400-132731-11	FB-1	Total/NA	Water	7470A	
400-132731-12	FERB-1	Total/NA	Water	7470A	
400-132731-13	MGWC-1	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	
400-132731-10 MS	MGWC-12	Total/NA	Water	7470A	
400-132731-10 MSD	MGWC-12	Total/NA	Water	7470A	

Analysis Batch: 339753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132731-1	MGWA-11	Total/NA	Water	7470A	339472
400-132731-2	MGWA-5	Total/NA	Water	7470A	339472
400-132731-3	MGWA-6	Total/NA	Water	7470A	339472
400-132731-4	MGWC-7	Total/NA	Water	7470A	339472
400-132731-5	DUP-1	Total/NA	Water	7470A	339472
400-132731-6	MGWC-8	Total/NA	Water	7470A	339472
400-132731-7	MGWC-3	Total/NA	Water	7470A	339472
400-132731-8	MGWA-10	Total/NA	Water	7470A	339472
MB 400-339472/14-A	Method Blank	Total/NA	Water	7470A	339472
LCS 400-339472/15-A	Lab Control Sample	Total/NA	Water	7470A	339472

Analysis Batch: 339805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132731-7 - DL	MGWC-3	Total Recoverable	Water	6020	339178
400-132731-9	MGWC-2	Total Recoverable	Water	6020	339670
400-132731-9 - DL	MGWC-2	Total Recoverable	Water	6020	339670
400-132731-10	MGWC-12	Total Recoverable	Water	6020	339670
400-132731-11	FB-1	Total Recoverable	Water	6020	339670
400-132731-12	FERB-1	Total Recoverable	Water	6020	339670
400-132731-13	MGWC-1	Total Recoverable	Water	6020	339670
400-132731-13 - DL	MGWC-1	Total Recoverable	Water	6020	339670
MB 400-339670/1-A ^5	Method Blank	Total Recoverable	Water	6020	339670
LCS 400-339670/2-A	Lab Control Sample	Total Recoverable	Water	6020	339670
400-132731-9 MS	MGWC-2	Total Recoverable	Water	6020	339670
400-132731-9 MSD	MGWC-2	Total Recoverable	Water	6020	339670

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Analysis Batch: 340132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132731-9	MGWC-2	Total/NA	Water	7470A	339694
400-132731-10	MGWC-12	Total/NA	Water	7470A	339694
400-132731-11	FB-1	Total/NA	Water	7470A	339694
400-132731-12	FERB-1	Total/NA	Water	7470A	339694
400-132731-13	MGWC-1	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
400-132731-10 MS	MGWC-12	Total/NA	Water	7470A	339694
400-132731-10 MSD	MGWC-12	Total/NA	Water	7470A	339694

General Chemistry

Analysis Batch: 339296

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132731-1	MGWA-11	Total/NA	Water	SM 2540C	
400-132731-2	MGWA-5	Total/NA	Water	SM 2540C	
400-132731-3	MGWA-6	Total/NA	Water	SM 2540C	
400-132731-4	MGWC-7	Total/NA	Water	SM 2540C	
400-132731-5	DUP-1	Total/NA	Water	SM 2540C	
400-132731-6	MGWC-8	Total/NA	Water	SM 2540C	
400-132731-7	MGWC-3	Total/NA	Water	SM 2540C	
400-132731-8	MGWA-10	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	
400-132731-1 DU	MGWA-11	Total/NA	Water	SM 2540C	

Analysis Batch: 339614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132731-9	MGWC-2	Total/NA	Water	SM 2540C	
400-132731-10	MGWC-12	Total/NA	Water	SM 2540C	
400-132731-11	FB-1	Total/NA	Water	SM 2540C	
400-132731-12	FERB-1	Total/NA	Water	SM 2540C	
400-132731-13	MGWC-1	Total/NA	Water	SM 2540C	
MB 400-339614/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-339614/2	Lab Control Sample	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-339381/4
Matrix: Water
Analysis Batch: 339381

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			01/21/17 04:19	1
Fluoride	<0.082		0.20	0.082	mg/L			01/21/17 04:19	1
Sulfate	<0.70		1.0	0.70	mg/L			01/21/17 04:19	1

Lab Sample ID: LCS 400-339381/5
Matrix: Water
Analysis Batch: 339381

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	10.6		mg/L		106	90 - 110

Lab Sample ID: LCSD 400-339381/6
Matrix: Water
Analysis Batch: 339381

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	9.52		mg/L		95	90 - 110	14	15
Sulfate	10.0	10.8		mg/L		108	90 - 110	3	15

Lab Sample ID: 400-132731-1 MS
Matrix: Water
Analysis Batch: 339381

Client Sample ID: MGWA-11
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	14.5		mg/L		107	80 - 120
Fluoride	0.11	J	10.0	11.3		mg/L		111	80 - 120
Sulfate	<0.70		10.0	11.6		mg/L		116	80 - 120

Lab Sample ID: 400-132731-1 MSD
Matrix: Water
Analysis Batch: 339381

Client Sample ID: MGWA-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	3.9		10.0	14.6		mg/L		107	80 - 120	0	20
Fluoride	0.11	J	10.0	9.81		mg/L		97	80 - 120	14	20
Sulfate	<0.70		10.0	11.9		mg/L		119	80 - 120	3	20

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

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Method: 300.0 - Anions, Ion Chromatography (Continued)

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: 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

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: 400-132731-6 MS
Matrix: Water
Analysis Batch: 340093

Client Sample ID: MGWC-8
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

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 400-132731-6 MSD
Matrix: Water
Analysis Batch: 340093

Client Sample ID: MGWC-8
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

Lab Sample ID: MB 400-340258/4
Matrix: Water
Analysis Batch: 340258

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			01/27/17 10:35	1
Fluoride	<0.082		0.20	0.082	mg/L			01/27/17 10:35	1
Sulfate	<0.70		1.0	0.70	mg/L			01/27/17 10:35	1

Lab Sample ID: LCS 400-340258/5
Matrix: Water
Analysis Batch: 340258

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	10.5		mg/L		105	90 - 110
Sulfate	10.0	10.3		mg/L		103	90 - 110

Lab Sample ID: LCSD 400-340258/6
Matrix: Water
Analysis Batch: 340258

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	1	15
Fluoride	10.0	10.3		mg/L		103	90 - 110	1	15
Sulfate	10.0	10.2		mg/L		102	90 - 110	1	15

Lab Sample ID: 400-132731-13 MS
Matrix: Water
Analysis Batch: 340258

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	14		10.0	23.3		mg/L		95	80 - 120
Fluoride	0.22		10.0	10.9		mg/L		107	80 - 120
Sulfate	140	E	10.0	147	E 4	mg/L		94	80 - 120

Lab Sample ID: 400-132731-13 MSD
Matrix: Water
Analysis Batch: 340258

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	14		10.0	23.2		mg/L		95	80 - 120	0	20
Fluoride	0.22		10.0	10.9		mg/L		107	80 - 120	0	20
Sulfate	140	E	10.0	148	E 4	mg/L		104	80 - 120	1	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

Method: 300.0 - Anions, Ion Chromatography (Continued)

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: 400-132731-9 MS
Matrix: Water
Analysis Batch: 340336

Client Sample ID: MGWC-2
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: 400-132731-9 MSD
Matrix: Water
Analysis Batch: 340336

Client Sample ID: MGWC-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	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

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-339178/1-A ^5
Matrix: Water
Analysis Batch: 339677

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 339178

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/20/17 13:45	01/24/17 13:42	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/20/17 13:45	01/24/17 13:42	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

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

Lab Sample ID: MB 400-339178/1-A ^5
Matrix: Water
Analysis Batch: 339677

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 339178

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		01/20/17 13:45	01/24/17 13:42	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 13:42	5
Boron	<0.021		0.050	0.021	mg/L		01/20/17 13:45	01/24/17 13:42	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/20/17 13:45	01/24/17 13:42	5
Calcium	<0.13		0.25	0.13	mg/L		01/20/17 13:45	01/24/17 13:42	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/20/17 13:45	01/24/17 13:42	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/20/17 13:45	01/24/17 13:42	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/20/17 13:45	01/24/17 13:42	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/20/17 13:45	01/24/17 13:42	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/20/17 13:45	01/24/17 13:42	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/20/17 13:45	01/24/17 13:42	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/20/17 13:45	01/24/17 13:42	5

Lab Sample ID: LCS 400-339178/2-A
Matrix: Water
Analysis Batch: 339677

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 339178

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0524		mg/L		105	80 - 120
Arsenic	0.0500	0.0506		mg/L		101	80 - 120
Barium	0.0500	0.0519		mg/L		104	80 - 120
Beryllium	0.0500	0.0550		mg/L		110	80 - 120
Boron	0.100	0.100		mg/L		100	80 - 120
Cadmium	0.0500	0.0510		mg/L		102	80 - 120
Calcium	5.00	4.82		mg/L		96	80 - 120
Chromium	0.0500	0.0497		mg/L		99	80 - 120
Cobalt	0.0500	0.0479		mg/L		96	80 - 120
Lead	0.0500	0.0507		mg/L		101	80 - 120
Lithium	0.0500	0.0524		mg/L		105	80 - 120
Molybdenum	0.100	0.102		mg/L		102	80 - 120
Selenium	0.0500	0.0496		mg/L		99	80 - 120
Thallium	0.0100	0.0103		mg/L		103	80 - 120

Lab Sample ID: MB 400-339670/1-A ^5
Matrix: Water
Analysis Batch: 339805

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 339670

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		01/25/17 08:40	01/25/17 14:39	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		01/25/17 08:40	01/25/17 14:39	5
Barium	<0.00049		0.0025	0.00049	mg/L		01/25/17 08:40	01/25/17 14:39	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 14:39	5
Boron	<0.021		0.050	0.021	mg/L		01/25/17 08:40	01/25/17 14:39	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		01/25/17 08:40	01/25/17 14:39	5
Calcium	<0.13		0.25	0.13	mg/L		01/25/17 08:40	01/25/17 14:39	5
Chromium	<0.0011		0.0025	0.0011	mg/L		01/25/17 08:40	01/25/17 14:39	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		01/25/17 08:40	01/25/17 14:39	5
Lead	<0.00035		0.0013	0.00035	mg/L		01/25/17 08:40	01/25/17 14:39	5
Lithium	<0.0032		0.0050	0.0032	mg/L		01/25/17 08:40	01/25/17 14:39	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

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

Lab Sample ID: MB 400-339670/1-A ^5
Matrix: Water
Analysis Batch: 339805

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 339670

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	<0.00085		0.015	0.00085	mg/L		01/25/17 08:40	01/25/17 14:39	5
Selenium	<0.00024		0.0013	0.00024	mg/L		01/25/17 08:40	01/25/17 14:39	5
Thallium	<0.000085		0.00050	0.000085	mg/L		01/25/17 08:40	01/25/17 14:39	5

Lab Sample ID: LCS 400-339670/2-A
Matrix: Water
Analysis Batch: 339805

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 339670

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0541		mg/L		108	80 - 120
Arsenic	0.0500	0.0512		mg/L		102	80 - 120
Barium	0.0500	0.0552		mg/L		110	80 - 120
Beryllium	0.0500	0.0533		mg/L		107	80 - 120
Boron	0.100	0.114		mg/L		114	80 - 120
Cadmium	0.0500	0.0489		mg/L		98	80 - 120
Calcium	5.00	5.15		mg/L		103	80 - 120
Chromium	0.0500	0.0473		mg/L		95	80 - 120
Cobalt	0.0500	0.0472		mg/L		94	80 - 120
Lead	0.0500	0.0491		mg/L		98	80 - 120
Lithium	0.0500	0.0514		mg/L		103	80 - 120
Molybdenum	0.100	0.0971		mg/L		97	80 - 120
Selenium	0.0500	0.0499		mg/L		100	80 - 120
Thallium	0.0100	0.0101		mg/L		101	80 - 120

Lab Sample ID: 400-132731-9 MS
Matrix: Water
Analysis Batch: 339805

Client Sample ID: MGWC-2
Prep Type: Total Recoverable
Prep Batch: 339670

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0010		0.0500	0.0558		mg/L		112	75 - 125
Arsenic	<0.00046		0.0500	0.0521		mg/L		104	75 - 125
Barium	0.060		0.0500	0.115		mg/L		109	75 - 125
Beryllium	<0.00034		0.0500	0.0521		mg/L		104	75 - 125
Cadmium	0.0080		0.0500	0.0572		mg/L		99	75 - 125
Chromium	<0.0011	F2 F1	0.0500	0.0482		mg/L		96	75 - 125
Cobalt	0.0032		0.0500	0.0510		mg/L		95	75 - 125
Lead	<0.00035		0.0500	0.0506		mg/L		101	75 - 125
Lithium	0.0051		0.0500	0.0554		mg/L		101	75 - 125
Molybdenum	<0.00085		0.100	0.102		mg/L		102	75 - 125
Selenium	<0.00024		0.0500	0.0505		mg/L		101	75 - 125
Thallium	<0.000085		0.0100	0.0105		mg/L		105	75 - 125

Lab Sample ID: 400-132731-9 MSD
Matrix: Water
Analysis Batch: 339805

Client Sample ID: MGWC-2
Prep Type: Total Recoverable
Prep Batch: 339670

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0542		mg/L		108	75 - 125	3	20
Arsenic	<0.00046		0.0500	0.0517		mg/L		103	75 - 125	1	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132731-1
SDG: Ash Pond

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

Lab Sample ID: 400-132731-9 MSD
Matrix: Water
Analysis Batch: 339805

Client Sample ID: MGWC-2
Prep Type: Total Recoverable
Prep Batch: 339670

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	
Barium	0.060		0.0500	0.115		mg/L		109	75 - 125	0	20
Beryllium	<0.00034		0.0500	0.0524		mg/L		105	75 - 125	1	20
Cadmium	0.0080		0.0500	0.0586		mg/L		101	75 - 125	2	20
Chromium	<0.0011	F2 F1	0.0500	0.0847	F1 F2	mg/L		169	75 - 125	55	20
Cobalt	0.0032		0.0500	0.0510		mg/L		96	75 - 125	0	20
Lead	<0.00035		0.0500	0.0515		mg/L		103	75 - 125	2	20
Lithium	0.0051		0.0500	0.0555		mg/L		101	75 - 125	0	20
Molybdenum	<0.00085		0.100	0.102		mg/L		102	75 - 125	0	20
Selenium	<0.00024		0.0500	0.0506		mg/L		101	75 - 125	0	20
Thallium	<0.00085		0.0100	0.0104		mg/L		104	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-339472/14-A
Matrix: Water
Analysis Batch: 339753

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339472

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000070		0.00020	0.000070	mg/L		01/23/17 14:38	01/25/17 12:56	1

Lab Sample ID: LCS 400-339472/15-A
Matrix: Water
Analysis Batch: 339753

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339472

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Mercury	0.00101	0.00102		mg/L		102	80 - 120

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	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000070		0.00020	0.000070	mg/L		01/25/17 09:17	01/27/17 12:30	1

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	LCS	Unit	D	%Rec	%Rec.
		Result	Qualifier				Limits
Mercury	0.00101	0.00103		mg/L		102	80 - 120

Lab Sample ID: 400-132731-10 MS
Matrix: Water
Analysis Batch: 340132

Client Sample ID: MGWC-12
Prep Type: Total/NA
Prep Batch: 339694

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				Limits
Mercury	<0.000070		0.00201	0.00213		mg/L		106	80 - 120

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-132731-1
 SDG: Ash Pond

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 400-132731-10 MSD
Matrix: Water
Analysis Batch: 340132

Client Sample ID: MGWC-12
Prep Type: Total/NA
Prep Batch: 339694

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070		0.00201	0.00201		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	%Rec. Limits
Total Dissolved Solids	293	254		mg/L		87	78 - 122

Lab Sample ID: 400-132731-1 DU
Matrix: Water
Analysis Batch: 339296

Client Sample ID: MGWA-11
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	Prepared	RPD	RPD Limit
Total Dissolved Solids	170		168		mg/L			0	5

Lab Sample ID: MB 400-339614/1
Matrix: Water
Analysis Batch: 339614

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 14:35	1

Lab Sample ID: LCS 400-339614/2
Matrix: Water
Analysis Batch: 339614

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

3355 McLamore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2571

Chain of Custody Record

537-1150

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 McIntosh - Ash Pond
 Site: CCR

Lab P/N: Whitmira, Cheyenne R
E-Mail: cheyenne.whitmira@testamericainc.com
Carrier Tracking No(s):
COG No:
Page: 1 of 1
Job #:

Analysis Requested
 Due Date Requested:
 TAT Requested (days):
 PO #:
 WO #:
 Project #: 0372382
 SSOW#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (G=water, B=soil, O=organic, M=metals, etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TSS - SM 2540C; Cl, F, O4 - EPA 300	Metals - (Part 237 Appendix B & IV) EPA 4020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320	Total Number of Containers	Special Instructions/Note:
MGWA-11	1/17/17	09:47	G	GW	X	X	X	X	X	3	
MGWA-5	1/17/17	11:14	G	GW	X	X	X	X	X	3	
MGWA-6	1/17/17	12:43	G	GW	X	X	X	X	X	3	
MGWC-7	1/17/17	13:05	G	GW	X	X	X	X	X	3	
DUP-1	1/17/17	-	G	GW	X	X	X	X	X	3	
MGWC-8	1/17/17	14:14	G	GW	X	X	X	X	X	3	
MGWC-3	1/17/17	15:58	G	GW	X	X	X	X	X	3	

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Polson 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/CC Requirements:

Empty Kit Relinquished by: Date: _____ Time: _____ Method of Shipment: _____
 Relinquished by: C. Hurdle C.H. Date/Time: 1-18-2017 10:08:30 Company: ERM
 Relinquished by: *Canya Quells* Date/Time: 1-18-2017 10:08:30 Company: Company
 Relinquished by: Date/Time: Company: Company
 Relinquished by: Date/Time: Company: Company

Custody Seals Intact: Yes No
 Custody Seal No.: 400-132731
 Cooler Temperature (°C and Other Remarks): 0.1/0.1 0.6/0.0



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Chain of Custody Record

TestAmerica Pensacola
3365 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1601 Fax (850) 478-2674

Client Information

Company: Southern Company
Address: 241 Ralph McGill Blvd SE B-18185
City: Atlanta
State, Zip: GA, 30308
Phone: 404-506-7238
Email: JAbraham@southernco.com
Project Name: Plant Malinch - Ash Pond
Site: CCR

Lab Pk: W/Infinite, Cheyenne R.
Request: (cheyenne.w/infinitet@testamericainc.co)

Center Tracking Note:

Request: 1 of 1
Job #:

Analysis Requested

Preservation Codes:
A - Cool
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - Nit-ISO4
F - MeOH
G - Amelcor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
Other:
M - Hexane
N - None
O - AsMeO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O8
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCHA
W - pH 4-5
X - Other (specify)

Due Date Requested:
TAT Requested (days):
FO #:
WO #:
Project #:
SSON#:

Sample Identification	Sample Date	Sample Time	Type (C=Comp, G=Grab)	(C=Comp, G=Grab)	Method	Reactivity	Person B	Unknown	Reactivity	Special Instructions/Notes
MGWC-2	1/18/17	09:05	G	GW	X		X	X	X	2nd Radium bottle
MGWC-12	1/18/17	10:47	G	GW	X		X	X	X	
FB-1	1/18/17	11:25	G	W	X		X	X	X	
FERB-1	1/18/17	11:35	G	W	X		X	X	X	

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month):
 Return To Client Disposal By Lab Archive For MORA

Special Instructions/QC Requirements:

Empty KE Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____

Relinquished by: *W. J. ...* Date: 1-19-17 10:15 Company: ERM

Relinquished by: *W. J. ...* Date: 01/23/17 14:23 Company: ERM

Relinquished by: *W. J. ...* Date: 1/24/17 9:16 Company: ERM

Custody Seals Intact: Custody Seal No. & Yes A NG



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132731-1

SDG Number: Ash Pond

Login Number: 132731

List Number: 1

Creator: Banda, Christy S

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	0.1°C, 0.6°C; 2.7°C IR-6; 0.8°C, 1.1°C; 1.6°C, 2.0°C
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 McIntosh

TestAmerica Job ID: 400-132731-1
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: 400-132731-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR - Plant McIntosh

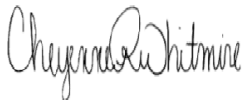
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

2/21/2017 5:05:38 PM

Cheyenne Whitmire, Project Manager II

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

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

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

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Method Summary

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

TestAmerica Job ID: 400-132731-2
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 McIntosh

TestAmerica Job ID: 400-132731-2
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-132731-1	MGWA-11	Water	01/17/17 09:47	01/18/17 08:30
400-132731-2	MGWA-5	Water	01/17/17 11:14	01/18/17 08:30
400-132731-3	MGWA-6	Water	01/17/17 12:43	01/18/17 08:30
400-132731-4	MGWC-7	Water	01/17/17 13:05	01/18/17 08:30
400-132731-5	DUP-1	Water	01/17/17 00:00	01/18/17 08:30
400-132731-6	MGWC-8	Water	01/17/17 14:14	01/18/17 08:30
400-132731-7	MGWC-3	Water	01/17/17 15:58	01/18/17 08:30
400-132731-8	MGWA-10	Water	01/16/17 15:30	01/18/17 15:31
400-132731-9	MGWC-2	Water	01/18/17 09:05	01/19/17 07:45
400-132731-10	MGWC-12	Water	01/18/17 10:47	01/19/17 07:45
400-132731-11	FB-1	Water	01/18/17 11:25	01/19/17 07:45
400-132731-12	FERB-1	Water	01/18/17 11:35	01/19/17 07:45
400-132731-13	MGWC-1	Water	01/19/17 09:25	01/20/17 13:45

Client Sample Results

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

TestAmerica Job ID: 400-132731-2
 SDG: Ash Pond

Client Sample ID: MGWA-11

Lab Sample ID: 400-132731-1

Date Collected: 01/17/17 09:47

Matrix: Water

Date Received: 01/18/17 08:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.221		0.138	0.140	1.00	0.188	pCi/L	01/25/17 13:20	02/17/17 20:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.3		40 - 110					01/25/17 13:20	02/17/17 20:38	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.04		0.357	0.369	1.00	0.488	pCi/L	01/25/17 15:22	02/14/17 13:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.3		40 - 110					01/25/17 15:22	02/14/17 13:05	1
Y Carrier	87.5		40 - 110					01/25/17 15:22	02/14/17 13:05	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.26		0.382	0.395	5.00	0.488	pCi/L		02/20/17 09:41	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-2
SDG: Ash Pond

Client Sample ID: MGWA-5

Lab Sample ID: 400-132731-2

Date Collected: 01/17/17 11:14

Matrix: Water

Date Received: 01/18/17 08:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.254		0.135	0.136	1.00	0.167	pCi/L	01/25/17 13:20	02/18/17 10:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.5		40 - 110					01/25/17 13:20	02/18/17 10:12	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.257	U	0.320	0.321	1.00	0.531	pCi/L	01/25/17 15:22	02/14/17 13:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.5		40 - 110					01/25/17 15:22	02/14/17 13:05	1
Y Carrier	84.9		40 - 110					01/25/17 15:22	02/14/17 13:05	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.511	U	0.348	0.349	5.00	0.531	pCi/L		02/20/17 09:41	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-2
 SDG: Ash Pond

Client Sample ID: MGWA-6
Date Collected: 01/17/17 12:43
Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-3
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	0.447		0.155	0.160	1.00	0.138	pCi/L	01/25/17 13:20	02/18/17 10:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.3		40 - 110					01/25/17 13:20	02/18/17 10:13	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.373	U	0.279	0.281	1.00	0.437	pCi/L	01/25/17 15:22	02/14/17 13:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.3		40 - 110					01/25/17 15:22	02/14/17 13:05	1
Y Carrier	85.2		40 - 110					01/25/17 15:22	02/14/17 13:05	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.820		0.319	0.323	5.00	0.437	pCi/L		02/20/17 09:41	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-2
 SDG: Ash Pond

Client Sample ID: MGWC-7

Lab Sample ID: 400-132731-4

Date Collected: 01/17/17 13:05

Matrix: Water

Date Received: 01/18/17 08:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.960		0.222	0.238	1.00	0.157	pCi/L	01/25/17 13:20	02/18/17 10:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.9		40 - 110					01/25/17 13:20	02/18/17 10:13	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.634		0.311	0.317	1.00	0.455	pCi/L	01/25/17 15:22	02/14/17 13:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.9		40 - 110					01/25/17 15:22	02/14/17 13:05	1
Y Carrier	81.9		40 - 110					01/25/17 15:22	02/14/17 13:05	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.59		0.383	0.397	5.00	0.455	pCi/L		02/20/17 09:41	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-2
 SDG: Ash Pond

Client Sample ID: DUP-1
Date Collected: 01/17/17 00:00
Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-5
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	0.941		0.264	0.277	1.00	0.213	pCi/L	01/25/17 13:20	02/18/17 10:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	65.0		40 - 110					01/25/17 13:20	02/18/17 10:13	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.533	U	0.367	0.370	1.00	0.568	pCi/L	01/25/17 15:22	02/14/17 13:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	65.0		40 - 110					01/25/17 15:22	02/14/17 13:05	1
Y Carrier	81.9		40 - 110					01/25/17 15:22	02/14/17 13:05	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.47		0.452	0.462	5.00	0.568	pCi/L		02/20/17 09:41	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-2
 SDG: Ash Pond

Client Sample ID: MGWC-8

Lab Sample ID: 400-132731-6

Date Collected: 01/17/17 14:14

Matrix: Water

Date Received: 01/18/17 08:30

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		0.223	0.241	1.00	0.147	pCi/L	01/25/17 13:20	02/18/17 10:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.2		40 - 110					01/25/17 13:20	02/18/17 10:13	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.744		0.308	0.316	1.00	0.428	pCi/L	01/25/17 15:22	02/14/17 13:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.2		40 - 110					01/25/17 15:22	02/14/17 13:05	1
Y Carrier	83.4		40 - 110					01/25/17 15:22	02/14/17 13:05	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.75		0.380	0.397	5.00	0.428	pCi/L		02/20/17 09:41	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-2
 SDG: Ash Pond

Client Sample ID: MGWC-3

Lab Sample ID: 400-132731-7

Date Collected: 01/17/17 15:58

Matrix: Water

Date Received: 01/18/17 08:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.967		0.214	0.231	1.00	0.146	pCi/L	01/25/17 13:20	02/18/17 10:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.8		40 - 110					01/25/17 13:20	02/18/17 10:13	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.929		0.327	0.338	1.00	0.441	pCi/L	01/25/17 15:22	02/14/17 13:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.8		40 - 110					01/25/17 15:22	02/14/17 13:05	1
Y Carrier	81.9		40 - 110					01/25/17 15:22	02/14/17 13:05	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.90		0.391	0.409	5.00	0.441	pCi/L		02/20/17 09:41	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-2
 SDG: Ash Pond

Client Sample ID: MGWA-10

Lab Sample ID: 400-132731-8

Date Collected: 01/16/17 15:30

Matrix: Water

Date Received: 01/18/17 15:31

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.539		0.165	0.172	1.00	0.147	pCi/L	01/25/17 13:20	02/18/17 10:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					01/25/17 13:20	02/18/17 10:13	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.562		0.284	0.288	1.00	0.418	pCi/L	01/25/17 15:22	02/14/17 13:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					01/25/17 15:22	02/14/17 13:05	1
Y Carrier	84.5		40 - 110					01/25/17 15:22	02/14/17 13:05	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.10		0.328	0.336	5.00	0.418	pCi/L		02/20/17 09:41	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-2
SDG: Ash Pond

Client Sample ID: MGWC-2

Lab Sample ID: 400-132731-9

Date Collected: 01/18/17 09:05

Matrix: Water

Date Received: 01/19/17 07:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.299		0.143	0.145	1.00	0.167	pCi/L	01/25/17 13:20	02/18/17 10:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.5		40 - 110					01/25/17 13:20	02/18/17 10:13	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.389	U	0.291	0.293	1.00	0.456	pCi/L	01/25/17 15:22	02/14/17 13:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	77.5		40 - 110					01/25/17 15:22	02/14/17 13:05	1
Y Carrier	82.6		40 - 110					01/25/17 15:22	02/14/17 13:05	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.688		0.324	0.327	5.00	0.456	pCi/L		02/20/17 09:41	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-2
SDG: Ash Pond

Client Sample ID: MGWC-12

Lab Sample ID: 400-132731-10

Date Collected: 01/18/17 10:47

Matrix: Water

Date Received: 01/19/17 07:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.174	U	0.135	0.136	1.00	0.198	pCi/L	01/25/17 13:20	02/18/17 10:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	69.2		40 - 110					01/25/17 13:20	02/18/17 10:13	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.128	U	0.284	0.284	1.00	0.489	pCi/L	01/25/17 15:22	02/14/17 13:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	69.2		40 - 110					01/25/17 15:22	02/14/17 13:06	1
Y Carrier	85.2		40 - 110					01/25/17 15:22	02/14/17 13:06	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.302	U	0.314	0.315	5.00	0.489	pCi/L		02/20/17 09:41	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-2
 SDG: Ash Pond

Client Sample ID: FB-1
Date Collected: 01/18/17 11:25
Date Received: 01/19/17 07:45

Lab Sample ID: 400-132731-11
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	0.158	U	0.118	0.119	1.00	0.171	pCi/L	01/25/17 13:20	02/18/17 10:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110					01/25/17 13:20	02/18/17 10:14	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.210	U	0.276	0.277	1.00	0.460	pCi/L	01/25/17 15:22	02/14/17 13:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110					01/25/17 15:22	02/14/17 13:06	1
Y Carrier	83.0		40 - 110					01/25/17 15:22	02/14/17 13:06	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.368	U	0.300	0.301	5.00	0.460	pCi/L		02/20/17 09:41	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-2
 SDG: Ash Pond

Client Sample ID: FERB-1
Date Collected: 01/18/17 11:35
Date Received: 01/19/17 07:45

Lab Sample ID: 400-132731-12
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	0.0277	U	0.0733	0.0734	1.00	0.139	pCi/L	01/25/17 13:20	02/18/17 10:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110					01/25/17 13:20	02/18/17 10:14	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.120	U	0.242	0.243	1.00	0.416	pCi/L	01/25/17 15:22	02/14/17 13:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.6		40 - 110					01/25/17 15:22	02/14/17 13:06	1
Y Carrier	84.1		40 - 110					01/25/17 15:22	02/14/17 13:06	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.147	U	0.253	0.253	5.00	0.416	pCi/L		02/20/17 09:41	1

Client Sample Results

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

TestAmerica Job ID: 400-132731-2
SDG: Ash Pond

Client Sample ID: MGWC-1

Lab Sample ID: 400-132731-13

Date Collected: 01/19/17 09:25

Matrix: Water

Date Received: 01/20/17 13:45

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.10		0.232	0.252	1.00	0.158	pCi/L	01/25/17 13:20	02/18/17 10:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.3		40 - 110					01/25/17 13:20	02/18/17 10:14	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.538		0.286	0.290	1.00	0.419	pCi/L	01/25/17 15:22	02/14/17 13:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.3		40 - 110					01/25/17 15:22	02/14/17 13:06	1
Y Carrier	80.7		40 - 110					01/25/17 15:22	02/14/17 13:06	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.64		0.368	0.385	5.00	0.419	pCi/L		02/20/17 09:41	1

Definitions/Glossary

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

TestAmerica Job ID: 400-132731-2
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 McIntosh

TestAmerica Job ID: 400-132731-2
SDG: Ash Pond

Client Sample ID: MGWA-11

Date Collected: 01/17/17 09:47

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289160	01/25/17 13:20	MBC	TAL SL
Total/NA	Analysis	9315		1	293055	02/17/17 20:38	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289179	01/25/17 15:22	MBC	TAL SL
Total/NA	Analysis	9320		1	292221	02/14/17 13:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	RTM	TAL SL

Client Sample ID: MGWA-5

Date Collected: 01/17/17 11:14

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289160	01/25/17 13:20	MBC	TAL SL
Total/NA	Analysis	9315		1	293143	02/18/17 10:12	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289179	01/25/17 15:22	MBC	TAL SL
Total/NA	Analysis	9320		1	292221	02/14/17 13:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	RTM	TAL SL

Client Sample ID: MGWA-6

Date Collected: 01/17/17 12:43

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289160	01/25/17 13:20	MBC	TAL SL
Total/NA	Analysis	9315		1	293143	02/18/17 10:13	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289179	01/25/17 15:22	MBC	TAL SL
Total/NA	Analysis	9320		1	292221	02/14/17 13:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	RTM	TAL SL

Client Sample ID: MGWC-7

Date Collected: 01/17/17 13:05

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289160	01/25/17 13:20	MBC	TAL SL
Total/NA	Analysis	9315		1	293143	02/18/17 10:13	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289179	01/25/17 15:22	MBC	TAL SL
Total/NA	Analysis	9320		1	292221	02/14/17 13:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-132731-2
SDG: Ash Pond

Client Sample ID: DUP-1

Date Collected: 01/17/17 00:00

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289160	01/25/17 13:20	MBC	TAL SL
Total/NA	Analysis	9315		1	293143	02/18/17 10:13	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289179	01/25/17 15:22	MBC	TAL SL
Total/NA	Analysis	9320		1	292221	02/14/17 13:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	RTM	TAL SL

Client Sample ID: MGWC-8

Date Collected: 01/17/17 14:14

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289160	01/25/17 13:20	MBC	TAL SL
Total/NA	Analysis	9315		1	293143	02/18/17 10:13	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289179	01/25/17 15:22	MBC	TAL SL
Total/NA	Analysis	9320		1	292221	02/14/17 13:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	RTM	TAL SL

Client Sample ID: MGWC-3

Date Collected: 01/17/17 15:58

Date Received: 01/18/17 08:30

Lab Sample ID: 400-132731-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289160	01/25/17 13:20	MBC	TAL SL
Total/NA	Analysis	9315		1	293143	02/18/17 10:13	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289179	01/25/17 15:22	MBC	TAL SL
Total/NA	Analysis	9320		1	292221	02/14/17 13:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	RTM	TAL SL

Client Sample ID: MGWA-10

Date Collected: 01/16/17 15:30

Date Received: 01/18/17 15:31

Lab Sample ID: 400-132731-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289160	01/25/17 13:20	MBC	TAL SL
Total/NA	Analysis	9315		1	293143	02/18/17 10:13	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289179	01/25/17 15:22	MBC	TAL SL
Total/NA	Analysis	9320		1	292221	02/14/17 13:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-132731-2
SDG: Ash Pond

Client Sample ID: MGWC-2

Lab Sample ID: 400-132731-9

Date Collected: 01/18/17 09:05

Matrix: Water

Date Received: 01/19/17 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289160	01/25/17 13:20	MBC	TAL SL
Total/NA	Analysis	9315		1	293143	02/18/17 10:13	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289179	01/25/17 15:22	MBC	TAL SL
Total/NA	Analysis	9320		1	292221	02/14/17 13:05	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	RTM	TAL SL

Client Sample ID: MGWC-12

Lab Sample ID: 400-132731-10

Date Collected: 01/18/17 10:47

Matrix: Water

Date Received: 01/19/17 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289160	01/25/17 13:20	MBC	TAL SL
Total/NA	Analysis	9315		1	293143	02/18/17 10:13	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289179	01/25/17 15:22	MBC	TAL SL
Total/NA	Analysis	9320		1	292221	02/14/17 13:06	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	RTM	TAL SL

Client Sample ID: FB-1

Lab Sample ID: 400-132731-11

Date Collected: 01/18/17 11:25

Matrix: Water

Date Received: 01/19/17 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289160	01/25/17 13:20	MBC	TAL SL
Total/NA	Analysis	9315		1	293143	02/18/17 10:14	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289179	01/25/17 15:22	MBC	TAL SL
Total/NA	Analysis	9320		1	292221	02/14/17 13:06	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	RTM	TAL SL

Client Sample ID: FERB-1

Lab Sample ID: 400-132731-12

Date Collected: 01/18/17 11:35

Matrix: Water

Date Received: 01/19/17 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289160	01/25/17 13:20	MBC	TAL SL
Total/NA	Analysis	9315		1	293143	02/18/17 10:14	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289179	01/25/17 15:22	MBC	TAL SL
Total/NA	Analysis	9320		1	292221	02/14/17 13:06	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-132731-2
SDG: Ash Pond

Client Sample ID: MGWC-1

Lab Sample ID: 400-132731-13

Date Collected: 01/19/17 09:25

Matrix: Water

Date Received: 01/20/17 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			289160	01/25/17 13:20	MBC	TAL SL
Total/NA	Analysis	9315		1	293143	02/18/17 10:14	RTM	TAL SL
Total/NA	Prep	PrecSep_0			289179	01/25/17 15:22	MBC	TAL SL
Total/NA	Analysis	9320		1	292221	02/14/17 13:06	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	293353	02/20/17 09:41	RTM	TAL SL

Laboratory References:

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

QC Association Summary

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

TestAmerica Job ID: 400-132731-2
 SDG: Ash Pond

Rad

Prep Batch: 289160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132731-1	MGWA-11	Total/NA	Water	PrecSep-21	
400-132731-2	MGWA-5	Total/NA	Water	PrecSep-21	
400-132731-3	MGWA-6	Total/NA	Water	PrecSep-21	
400-132731-4	MGWC-7	Total/NA	Water	PrecSep-21	
400-132731-5	DUP-1	Total/NA	Water	PrecSep-21	
400-132731-6	MGWC-8	Total/NA	Water	PrecSep-21	
400-132731-7	MGWC-3	Total/NA	Water	PrecSep-21	
400-132731-8	MGWA-10	Total/NA	Water	PrecSep-21	
400-132731-9	MGWC-2	Total/NA	Water	PrecSep-21	
400-132731-10	MGWC-12	Total/NA	Water	PrecSep-21	
400-132731-11	FB-1	Total/NA	Water	PrecSep-21	
400-132731-12	FERB-1	Total/NA	Water	PrecSep-21	
400-132731-13	MGWC-1	Total/NA	Water	PrecSep-21	
MB 160-289160/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-289160/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-132731-10 DU	MGWC-12	Total/NA	Water	PrecSep-21	

Prep Batch: 289179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-132731-1	MGWA-11	Total/NA	Water	PrecSep_0	
400-132731-2	MGWA-5	Total/NA	Water	PrecSep_0	
400-132731-3	MGWA-6	Total/NA	Water	PrecSep_0	
400-132731-4	MGWC-7	Total/NA	Water	PrecSep_0	
400-132731-5	DUP-1	Total/NA	Water	PrecSep_0	
400-132731-6	MGWC-8	Total/NA	Water	PrecSep_0	
400-132731-7	MGWC-3	Total/NA	Water	PrecSep_0	
400-132731-8	MGWA-10	Total/NA	Water	PrecSep_0	
400-132731-9	MGWC-2	Total/NA	Water	PrecSep_0	
400-132731-10	MGWC-12	Total/NA	Water	PrecSep_0	
400-132731-11	FB-1	Total/NA	Water	PrecSep_0	
400-132731-12	FERB-1	Total/NA	Water	PrecSep_0	
400-132731-13	MGWC-1	Total/NA	Water	PrecSep_0	
MB 160-289179/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-289179/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-132731-10 DU	MGWC-12	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-132731-2
SDG: Ash Pond

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-289160/1-A
Matrix: Water
Analysis Batch: 293055

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 289160

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03318	U	0.102	0.102	1.00	0.192	pCi/L	01/25/17 13:20	02/17/17 20:37	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.1		40 - 110					01/25/17 13:20	02/17/17 20:37	1

Lab Sample ID: LCS 160-289160/2-A
Matrix: Water
Analysis Batch: 293055

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 289160

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	6.01	8.258		0.981	1.00	0.173	pCi/L	137	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	80.1		40 - 110						

Lab Sample ID: 400-132731-10 DU
Matrix: Water
Analysis Batch: 293143

Client Sample ID: MGWC-12
Prep Type: Total/NA
Prep Batch: 289160

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.174	U	0.2103		0.137	1.00	0.184	pCi/L	0.13	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	68.4		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-289179/1-A
Matrix: Water
Analysis Batch: 292221

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 289179

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.09960	U	0.308	0.308	1.00	0.561	pCi/L	01/25/17 15:22	02/14/17 13:04	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.1		40 - 110					01/25/17 15:22	02/14/17 13:04	1
Y Carrier	82.2		40 - 110					01/25/17 15:22	02/14/17 13:04	1

QC Sample Results

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

TestAmerica Job ID: 400-132731-2
SDG: Ash Pond

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

Lab Sample ID: LCS 160-289179/2-A
Matrix: Water
Analysis Batch: 292221

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 289179

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.8	18.33		1.98	1.00	0.492	pCi/L	132	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	80.1		40 - 110
Y Carrier	80.0		40 - 110

Lab Sample ID: 400-132731-10 DU
Matrix: Water
Analysis Batch: 292221

Client Sample ID: MGWC-12
Prep Type: Total/NA
Prep Batch: 289179

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.128	U	0.3301	U	0.343	1.00	0.557	pCi/L	0.32	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	68.4		40 - 110
Y Carrier	82.6		40 - 110

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

Lab Sample ID: 400-132731-10 DU
Matrix: Water
Analysis Batch: 293353

Client Sample ID: MGWC-12
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	0.302	U	0.5404	U	0.370	5.00	0.557	pCi/L	0.35	

3355 McLamore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2571

Chain of Custody Record

537-1150

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 McIntosh - Ash Pond**
 Site: **CCR**

Lab PIN: **Whitlira, Chyenne R**
 E-Mail: **chyenne.whitlira@testamericainc.com**
 Carrier Tracking No(s):
 COC No:
 Page: **1 of 1**
 Job #:

Analysis Requested
 Due Date Requested:
 TAT Requested (days):
 PO #:
 WO #:
 Project #: **0372382**
 SSOW#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (G=water, B=soil, O=oil, S=sediment, etc.)	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Matrix		Total Number of Containers	Special Instructions/Note:
					I	D	I	D	TSS - SM 2540C; Cl, F, OC4 - EPA 300	Radium 226 & 228 - SW 465 9315 & 9320		
MGWA-11	1/17/17	09:47	G	GW	X	X	X	X	D	D	3	
MGWA-5	1/17/17	11:14	G	GW	X	X	X	X			3	
MGWA-6	1/17/17	12:43	G	GW	X	X	X	X			3	
MGWC-7	1/17/17	13:05	G	GW	X	X	X	X			3	
DUP-1	1/17/17	-	G	GW	X	X	X	X			3	
MGWC-8	1/17/17	14:14	G	GW	X	X	X	X			3	
MGWC-3	1/17/17	15:58	G	GW	X	X	X	X			3	

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Polson 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/CC Requirements:

Empty Kit Relinquished by: _____ Date: _____
Relinquished by: **Canya Quells** Date/Time: **1-18-2017 10:30** Company: **ERM**
Relinquished by: _____ Date/Time: _____ Company: _____
Relinquished by: _____ Date/Time: _____ Company: _____
 Custody Seals Intact: Yes No
 Cooler Temperature (°C and Other Remarks): **0.1/0.1 0.6/0.0**
 Date/Time: **1-18-17** 830 Company: **JAN**
 Date/Time: _____ Company: _____
 Date/Time: _____ Company: _____
400-132731

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

Chain of Custody Record

Carrier Tracking No(s): _____

Lab P.M.: Whitmire, Cheyenne R

Sampler: T. Payne 3756; C. Hurdle c.c.f.; G. Jirak G.J.

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 McIntosh - Ash Pond
Site: CCR

Sample Identification	Sample Date	Sample Time	Type (C=Comp, G=grab)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TDS - SM 2540C; Cl ⁻ , SO ₄ - EPA 300	Metals - (Part 267 Appendix III & IV) EPA 6020 & EPA 7470	Radium 226 & 228 - SW-846 9315 & 9320
MGWA-10	1/16/17	15:30	G	W	X	X	X	X	X

Analysis Requested	Total Number of Containers	Special Instructions/Note:
	3	

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant
 Deliverable Requested: I, II, III, IV, Other (specify) _____

Return To Client Disposal By Lab Archive For _____ Month

Special Instructions/QC Requirements: _____

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: [Signature]	1/17/17	12:10	Company: ERM
Relinquished by: [Signature]	1/17/17	1500	Company: ERM
Relinquished by: [Signature]	1/17/2017	12:10	Company: [Signature]
Relinquished by: [Signature]	1/18/17	13:31	Company: [Signature]

Cooler Temperature(s) °C and Other Remarks: 2.7°C 10L

Custody Seals Intact: Yes No



Chain of Custody Record

TestAmerica Pensacola
3365 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1601 Fax (850) 478-2671

Client Information
Company: Southern Company
Address: 241 Ralph McGill Blvd SE B-18185
City: Atlanta
State, Zip: GA, 30308
Phone: 404-506-7239
Email: JAbraham@southernco.com
Project Name: Plant Malinch - Ash Pond
Site: CCR

Sample Information
Sample: C. Hurdle, Zn, M, Rogers M.R.
Lab Pk: W/Intra, Cheyenne R.
Request: 1 of 1
Job #: 1000102

Analysis Requested
Due Date Requested: TAT Requested (date):
Preservation Codes:
A - Cool
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amelcor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
Other:

Sample Identification

Sample ID	Sample Date	Sample Time	Type (C=Comp, G=Grab)	Container (G=Glass, P=Plastic, B=Butyl, A=Al)	Remarks
MGWC-2	1/18/17	09:05	G	GW	
MGWC-12	1/18/17	10:47	G	GW	
FB-1	1/18/17	11:25	G	W	
FERB-1	1/18/17	11:35	G	W	

Special Instructions/Notes:
2nd Radium bottle

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client
 Disposal By Lab
 Archive For: *Mora*

Special Instructions/QC Requirements:

Possible Hazard Identification
 Non-Hazard
 Flammable
 Skin Irritant
 Deleterious Request: I, II, III, IV, Other (specify)

Empty KE Relinquished by:
Relinquished by: *W. H. Ye*
Relinquished by: *[Signature]*
Relinquished by: *[Signature]*

Company/Date/Time
 Date/Time: 1-19-17 10:15
 Date/Time: 01/23/17 14:23
 Date/Time: 1/24/17 9:16

Company/Date/Time
 Company: *[Signature]*
 Company: *[Signature]*
 Company: *[Signature]*

Custody Seals Intact
 Yes
 No



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-132731-2

SDG Number: Ash Pond

Login Number: 132731

List Number: 1

Creator: Banda, Christy S

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.1°C, 0.6°C; 2.7°C IR-6; 0.8°C, 1.1°C; 1.6°C, 2.0°C
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 McIntosh

TestAmerica Job ID: 400-132731-2
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
Louisiana	NELAP	6	30976	06-30-17
Louisiana (DW)	NELAP Secondary AB	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

Laboratory: TestAmerica St. Louis

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-17
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-17 *
Florida	NELAP	4	E87689	06-30-17
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17
Nevada	State Program	9	MO000542017-1	07-31-17
New Jersey	NELAP	2	MO002	06-30-17
New York	NELAP	2	11616	03-31-17 *
North Dakota	State Program	8	R207	06-30-17

* Certification renewal pending - certification considered valid.

Certification Summary

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

TestAmerica Job ID: 400-132731-2
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		P330-17-0028	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: 400-134758-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR - Plant McIntosh

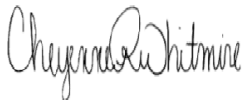
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

3/18/2017 2:07:44 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

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 McIntosh

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Job ID: 400-134758-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-134758-1

HPLC/IC

Method(s) 300.0: The method blank for analytical batch 345156 contained Fluoride 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 CCB for analytical batch 345156 contained Fluoride 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: MGWC-7 (400-134758-5), MGWC-8 (400-134758-6), MGWC-1 (400-134758-7), MGWC-3 (400-134758-8), MGWC-2 (400-134758-9), DUP-1 (400-134758-11), (400-134758-A-5 MS) and (400-134758-A-5 MSD). Elevated reporting limits (RLs) are provided.

Metals

Method(s) 6020: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 344597 and analytical batch 345106 recovered outside control limits for the following analytes: Antimony and Lead. 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 345106 recovered above the upper control limit for Antimony and Lead. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MGWC-1 (400-134758-7), MGWC-3 (400-134758-8), MGWC-2 (400-134758-9), MGWC-12 (400-134758-10), DUP-1 (400-134758-11), FB-1 (400-134758-12) and FERB-1 (400-134758-13).

Method(s) 6020: The continuing calibration verification (CCV) associated with batch 345106 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 sample is impacted: MGWA-10 (400-134758-1).

Method(s) 6020: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 344597 and analytical batch 345106 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 following samples were diluted to bring the concentration of target analytes within the calibration range: MGWC-8 (400-134758-6) and MGWC-2 (400-134758-9). Elevated reporting limits (RLs) are provided.

Method(s) 6020: The continuing calibration verification (CCV) associated with batch 345106 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 samples are impacted: MGWA-5 (400-134758-3), MGWA-6 (400-134758-4), MGWC-7 (400-134758-5) and MGWC-8 (400-134758-6).

Method(s) 6020: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 344597 and analytical batch 345106 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.

Method(s) 6020: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 344597 and analytical batch 345240 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 continuing calibration verification (CCV) associated with batch 345240 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: MGWA-5 (400-134758-3), MGWA-6 (400-134758-4), MGWC-7 (400-134758-5) and MGWC-8 (400-134758-6).

Case Narrative

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Job ID: 400-134758-1 (Continued)

Laboratory: TestAmerica Pensacola (Continued)

Method(s) 6020: The laboratory control sample (LCS) for preparation batch 344597 and analytical batch 345240 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.

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Detection Summary

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Client Sample ID: MGWA-10

Lab Sample ID: 400-134758-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.9		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.12	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	1.4		1.0	0.70	mg/L	1		300.0	Total/NA
Barium	0.027		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	5.4		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0063		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0073		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	78		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWA-11

Lab Sample ID: 400-134758-2

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
Fluoride	0.18	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Arsenic	0.0015		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.11		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	35		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0030		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.019		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	210		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWA-5

Lab Sample ID: 400-134758-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.3		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.16	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	5.6		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	28		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0032		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0076		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	170		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWA-6

Lab Sample ID: 400-134758-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.6		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.15	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	15		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.021		0.0013	0.00046	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 McIntosh

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Client Sample ID: MGWA-6 (Continued)

Lab Sample ID: 400-134758-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.043		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.14		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	100		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0032		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00046	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	330		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-7

Lab Sample ID: 400-134758-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.36	B	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	180		5.0	3.5	mg/L	5		300.0	Total/NA
Arsenic	0.00090	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.013		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.3		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	52		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0034		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.013		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.13		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	340		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-8

Lab Sample ID: 400-134758-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.3		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.16	J B	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	0.037		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00068	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	33		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0031		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0064		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.031		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Thallium	0.00018	J	0.00050	0.000085	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 McIntosh

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Client Sample ID: MGWC-8 (Continued)

Lab Sample ID: 400-134758-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron - DL	1.8		0.25	0.11	mg/L	25		6020	Total
Total Dissolved Solids	270		5.0	3.4	mg/L	1		SM 2540C	Recoverable Total/NA

Client Sample ID: MGWC-1

Lab Sample ID: 400-134758-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.27	B	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	130		5.0	3.5	mg/L	5		300.0	Total/NA
Arsenic	0.0027		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.097		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.89		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	89		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0036		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.013		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0012	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	360		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-3

Lab Sample ID: 400-134758-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.15	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	100		5.0	3.5	mg/L	5		300.0	Total/NA
Arsenic	0.0018		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.15		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.3		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	99		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0030		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.00064	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.013		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	410		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-2

Lab Sample ID: 400-134758-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	18		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.15	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	240		5.0	3.5	mg/L	5		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Client Sample ID: MGWC-2 (Continued)

Lab Sample ID: 400-134758-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00065	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.056		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.0050		0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	120		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0033		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Cobalt	0.0042		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0061		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Boron - DL	3.3		0.25	0.11	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	660		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-12

Lab Sample ID: 400-134758-10

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
Fluoride	0.28	B	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
Arsenic	0.00082	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.040		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.064		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	26		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0032		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.015		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	170		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-1

Lab Sample ID: 400-134758-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.37	B	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	170		5.0	3.5	mg/L	5		300.0	Total/NA
Arsenic	0.00090	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.014		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.3		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	52		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0035		0.0025	0.0011	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 McIntosh

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Client Sample ID: DUP-1 (Continued)

Lab Sample ID: 400-134758-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.012		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.13		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	340		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-1

Lab Sample ID: 400-134758-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.085	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Boron	0.024	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Chromium	0.0033		0.0025	0.0011	mg/L	5		6020	Total Recoverable

Client Sample ID: FERB-1

Lab Sample ID: 400-134758-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.085	J B	0.20	0.082	mg/L	1		300.0	Total/NA
Chromium	0.0033		0.0025	0.0011	mg/L	5		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

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

TestAmerica Job ID: 400-134758-1
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 McIntosh

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-134758-1	MGWA-10	Water	03/02/17 09:30	03/04/17 08:36
400-134758-2	MGWA-11	Water	03/02/17 09:30	03/04/17 08:36
400-134758-3	MGWA-5	Water	03/02/17 10:45	03/04/17 08:36
400-134758-4	MGWA-6	Water	03/02/17 10:45	03/04/17 08:36
400-134758-5	MGWC-7	Water	03/02/17 11:02	03/04/17 08:36
400-134758-6	MGWC-8	Water	03/02/17 12:05	03/04/17 08:36
400-134758-7	MGWC-1	Water	03/02/17 12:00	03/04/17 08:36
400-134758-8	MGWC-3	Water	03/02/17 12:35	03/04/17 08:36
400-134758-9	MGWC-2	Water	03/02/17 13:30	03/04/17 08:36
400-134758-10	MGWC-12	Water	03/02/17 13:30	03/04/17 08:36
400-134758-11	DUP-1	Water	03/02/17 00:00	03/04/17 08:36
400-134758-12	FB-1	Water	03/02/17 12:45	03/04/17 08:36
400-134758-13	FERB-1	Water	03/02/17 12:55	03/04/17 08:36

Client Sample Results

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Client Sample ID: MGWA-10

Date Collected: 03/02/17 09:30

Date Received: 03/04/17 08:36

Lab Sample ID: 400-134758-1

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.9		1.0	0.89	mg/L			03/09/17 16:12	1
Fluoride	0.12	J B	0.20	0.082	mg/L			03/09/17 16:12	1
Sulfate	1.4		1.0	0.70	mg/L			03/09/17 16:12	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		03/06/17 10:55	03/08/17 15:05	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:55	03/08/17 15:05	5
Barium	0.027		0.0025	0.00049	mg/L		03/06/17 10:55	03/08/17 15:05	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 15:05	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:55	03/08/17 15:05	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 15:05	5
Calcium	5.4		0.25	0.13	mg/L		03/06/17 10:55	03/08/17 15:05	5
Chromium	0.0063		0.0025	0.0011	mg/L		03/06/17 10:55	03/08/17 15:05	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/06/17 10:55	03/08/17 15:05	5
Lithium	0.0073		0.0050	0.0032	mg/L		03/06/17 10:55	03/08/17 15:05	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:55	03/08/17 15:05	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:55	03/08/17 15:05	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:55	03/08/17 15:05	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		03/06/17 10:55	03/09/17 14:02	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		03/06/17 09:01	03/10/17 15:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	78		5.0	3.4	mg/L			03/07/17 14:44	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Client Sample ID: MGWA-11

Date Collected: 03/02/17 09:30

Date Received: 03/04/17 08:36

Lab Sample ID: 400-134758-2

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.5		1.0	0.89	mg/L			03/09/17 16:35	1
Fluoride	0.18	J B	0.20	0.082	mg/L			03/09/17 16:35	1
Sulfate	<0.70		1.0	0.70	mg/L			03/09/17 16:35	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		03/06/17 10:55	03/08/17 15:10	5
Arsenic	0.0015		0.0013	0.00046	mg/L		03/06/17 10:55	03/08/17 15:10	5
Barium	0.11		0.0025	0.00049	mg/L		03/06/17 10:55	03/08/17 15:10	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 15:10	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:55	03/08/17 15:10	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 15:10	5
Calcium	35		0.25	0.13	mg/L		03/06/17 10:55	03/08/17 15:10	5
Chromium	0.0030		0.0025	0.0011	mg/L		03/06/17 10:55	03/08/17 15:10	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/06/17 10:55	03/08/17 15:10	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		03/06/17 10:55	03/08/17 15:10	5
Lithium	0.019		0.0050	0.0032	mg/L		03/06/17 10:55	03/08/17 15:10	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:55	03/08/17 15:10	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:55	03/08/17 15:10	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:55	03/08/17 15:10	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		03/06/17 09:01	03/10/17 15:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	210		5.0	3.4	mg/L			03/07/17 14:44	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Client Sample ID: MGWA-5

Lab Sample ID: 400-134758-3

Date Collected: 03/02/17 10:45

Matrix: Water

Date Received: 03/04/17 08:36

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.3		1.0	0.89	mg/L			03/09/17 16:58	1
Fluoride	0.16	J B	0.20	0.082	mg/L			03/09/17 16:58	1
Sulfate	5.6		1.0	0.70	mg/L			03/09/17 16:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:55	03/08/17 15:14	5
Barium	0.037		0.0025	0.00049	mg/L		03/06/17 10:55	03/08/17 15:14	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 15:14	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:55	03/08/17 15:14	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 15:14	5
Calcium	28		0.25	0.13	mg/L		03/06/17 10:55	03/08/17 15:14	5
Chromium	0.0032		0.0025	0.0011	mg/L		03/06/17 10:55	03/08/17 15:14	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/06/17 10:55	03/08/17 15:14	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		03/06/17 10:55	03/08/17 15:14	5
Lithium	0.0076		0.0050	0.0032	mg/L		03/06/17 10:55	03/08/17 15:14	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:55	03/08/17 15:14	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:55	03/08/17 15:14	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:55	03/08/17 15:14	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	* ^	0.0025	0.0010	mg/L		03/06/17 10:55	03/09/17 14:24	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/06/17 09:01	03/10/17 15:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	170		5.0	3.4	mg/L			03/07/17 14:44	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Client Sample ID: MGWA-6

Lab Sample ID: 400-134758-4

Date Collected: 03/02/17 10:45

Matrix: Water

Date Received: 03/04/17 08:36

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.6		1.0	0.89	mg/L			03/09/17 18:06	1
Fluoride	0.15	J B	0.20	0.082	mg/L			03/09/17 18:06	1
Sulfate	15		1.0	0.70	mg/L			03/09/17 18:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.021		0.0013	0.00046	mg/L		03/06/17 10:55	03/08/17 15:19	5
Barium	0.043		0.0025	0.00049	mg/L		03/06/17 10:55	03/08/17 15:19	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 15:19	5
Boron	0.14		0.050	0.021	mg/L		03/06/17 10:55	03/08/17 15:19	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 15:19	5
Calcium	100		0.25	0.13	mg/L		03/06/17 10:55	03/08/17 15:19	5
Chromium	0.0032		0.0025	0.0011	mg/L		03/06/17 10:55	03/08/17 15:19	5
Cobalt	0.00046	J	0.0025	0.00040	mg/L		03/06/17 10:55	03/08/17 15:19	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		03/06/17 10:55	03/08/17 15:19	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:55	03/08/17 15:19	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:55	03/08/17 15:19	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:55	03/08/17 15:19	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:55	03/08/17 15:19	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	* ^	0.0025	0.0010	mg/L		03/06/17 10:55	03/09/17 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		03/06/17 09:01	03/10/17 15:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	330		5.0	3.4	mg/L			03/07/17 14:44	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Client Sample ID: MGWC-7

Lab Sample ID: 400-134758-5

Date Collected: 03/02/17 11:02

Matrix: Water

Date Received: 03/04/17 08:36

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		1.0	0.89	mg/L			03/09/17 17:21	1
Fluoride	0.36	B	0.20	0.082	mg/L			03/09/17 17:21	1
Sulfate	180		5.0	3.5	mg/L			03/10/17 11:59	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00090	J	0.0013	0.00046	mg/L		03/06/17 10:55	03/08/17 15:24	5
Barium	0.013		0.0025	0.00049	mg/L		03/06/17 10:55	03/08/17 15:24	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 15:24	5
Boron	1.3		0.050	0.021	mg/L		03/06/17 10:55	03/08/17 15:24	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 15:24	5
Calcium	52		0.25	0.13	mg/L		03/06/17 10:55	03/08/17 15:24	5
Chromium	0.0034		0.0025	0.0011	mg/L		03/06/17 10:55	03/08/17 15:24	5
Cobalt	0.013		0.0025	0.00040	mg/L		03/06/17 10:55	03/08/17 15:24	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		03/06/17 10:55	03/08/17 15:24	5
Lithium	0.13		0.0050	0.0032	mg/L		03/06/17 10:55	03/08/17 15:24	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:55	03/08/17 15:24	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:55	03/08/17 15:24	5
Thallium	<0.00085		0.00050	0.000085	mg/L		03/06/17 10:55	03/08/17 15:24	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	* ^	0.0025	0.0010	mg/L		03/06/17 10:55	03/09/17 14:33	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		03/06/17 09:01	03/10/17 15:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	340		5.0	3.4	mg/L			03/07/17 14:44	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Client Sample ID: MGWC-8

Lab Sample ID: 400-134758-6

Date Collected: 03/02/17 12:05

Matrix: Water

Date Received: 03/04/17 08:36

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.3		1.0	0.89	mg/L			03/09/17 18:29	1
Fluoride	0.16	J B	0.20	0.082	mg/L			03/09/17 18:29	1
Sulfate	160		5.0	3.5	mg/L			03/10/17 13:07	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:55	03/08/17 15:28	5
Barium	0.037		0.0025	0.00049	mg/L		03/06/17 10:55	03/08/17 15:28	5
Beryllium	0.00068	J	0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 15:28	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 15:28	5
Calcium	33		0.25	0.13	mg/L		03/06/17 10:55	03/08/17 15:28	5
Chromium	0.0031		0.0025	0.0011	mg/L		03/06/17 10:55	03/08/17 15:28	5
Cobalt	0.0064		0.0025	0.00040	mg/L		03/06/17 10:55	03/08/17 15:28	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		03/06/17 10:55	03/08/17 15:28	5
Lithium	0.031		0.0050	0.0032	mg/L		03/06/17 10:55	03/08/17 15:28	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:55	03/08/17 15:28	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:55	03/08/17 15:28	5
Thallium	0.00018	J	0.00050	0.000085	mg/L		03/06/17 10:55	03/08/17 15:28	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.8		0.25	0.11	mg/L		03/06/17 10:55	03/08/17 16:23	25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	* ^	0.0025	0.0010	mg/L		03/06/17 10:55	03/09/17 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		03/06/17 09:01	03/10/17 15:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	270		5.0	3.4	mg/L			03/07/17 14:44	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Client Sample ID: MGWC-1

Lab Sample ID: 400-134758-7

Date Collected: 03/02/17 12:00

Matrix: Water

Date Received: 03/04/17 08:36

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		1.0	0.89	mg/L			03/09/17 19:37	1
Fluoride	0.27	B	0.20	0.082	mg/L			03/09/17 19:37	1
Sulfate	130		5.0	3.5	mg/L			03/10/17 13:30	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		03/06/17 10:55	03/08/17 15:51	5
Arsenic	0.0027		0.0013	0.00046	mg/L		03/06/17 10:55	03/08/17 15:51	5
Barium	0.097		0.0025	0.00049	mg/L		03/06/17 10:55	03/08/17 15:51	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 15:51	5
Boron	0.89		0.050	0.021	mg/L		03/06/17 10:55	03/08/17 15:51	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 15:51	5
Calcium	89		0.25	0.13	mg/L		03/06/17 10:55	03/08/17 15:51	5
Chromium	0.0036		0.0025	0.0011	mg/L		03/06/17 10:55	03/08/17 15:51	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/06/17 10:55	03/08/17 15:51	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		03/06/17 10:55	03/08/17 15:51	5
Lithium	0.013		0.0050	0.0032	mg/L		03/06/17 10:55	03/08/17 15:51	5
Molybdenum	0.0012	J	0.015	0.00085	mg/L		03/06/17 10:55	03/08/17 15:51	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:55	03/08/17 15:51	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:55	03/08/17 15:51	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		03/06/17 09:01	03/10/17 15:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	360		5.0	3.4	mg/L			03/07/17 14:44	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Client Sample ID: MGWC-3

Lab Sample ID: 400-134758-8

Date Collected: 03/02/17 12:35

Matrix: Water

Date Received: 03/04/17 08:36

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		1.0	0.89	mg/L			03/09/17 20:00	1
Fluoride	0.15	J B	0.20	0.082	mg/L			03/09/17 20:00	1
Sulfate	100		5.0	3.5	mg/L			03/10/17 13:53	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		03/06/17 10:55	03/08/17 15:55	5
Arsenic	0.0018		0.0013	0.00046	mg/L		03/06/17 10:55	03/08/17 15:55	5
Barium	0.15		0.0025	0.00049	mg/L		03/06/17 10:55	03/08/17 15:55	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 15:55	5
Boron	1.3		0.050	0.021	mg/L		03/06/17 10:55	03/08/17 15:55	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 15:55	5
Calcium	99		0.25	0.13	mg/L		03/06/17 10:55	03/08/17 15:55	5
Chromium	0.0030		0.0025	0.0011	mg/L		03/06/17 10:55	03/08/17 15:55	5
Cobalt	0.00064	J	0.0025	0.00040	mg/L		03/06/17 10:55	03/08/17 15:55	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		03/06/17 10:55	03/08/17 15:55	5
Lithium	0.013		0.0050	0.0032	mg/L		03/06/17 10:55	03/08/17 15:55	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:55	03/08/17 15:55	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:55	03/08/17 15:55	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:55	03/08/17 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		03/06/17 09:01	03/10/17 15:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	410		5.0	3.4	mg/L			03/07/17 14:44	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Client Sample ID: MGWC-2

Lab Sample ID: 400-134758-9

Date Collected: 03/02/17 13:30

Matrix: Water

Date Received: 03/04/17 08:36

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18		1.0	0.89	mg/L			03/09/17 20:23	1
Fluoride	0.15	J B	0.20	0.082	mg/L			03/09/17 20:23	1
Sulfate	240		5.0	3.5	mg/L			03/10/17 14:16	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		03/06/17 10:55	03/08/17 16:00	5
Arsenic	0.00065	J	0.0013	0.00046	mg/L		03/06/17 10:55	03/08/17 16:00	5
Barium	0.056		0.0025	0.00049	mg/L		03/06/17 10:55	03/08/17 16:00	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 16:00	5
Cadmium	0.0050		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 16:00	5
Calcium	120		0.25	0.13	mg/L		03/06/17 10:55	03/08/17 16:00	5
Chromium	0.0033		0.0025	0.0011	mg/L		03/06/17 10:55	03/08/17 16:00	5
Cobalt	0.0042		0.0025	0.00040	mg/L		03/06/17 10:55	03/08/17 16:00	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		03/06/17 10:55	03/08/17 16:00	5
Lithium	0.0061		0.0050	0.0032	mg/L		03/06/17 10:55	03/08/17 16:00	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:55	03/08/17 16:00	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:55	03/08/17 16:00	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:55	03/08/17 16:00	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.3		0.25	0.11	mg/L		03/06/17 10:55	03/08/17 16:27	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		03/06/17 09:01	03/10/17 14:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	660		5.0	3.4	mg/L			03/07/17 14:44	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Client Sample ID: MGWC-12

Lab Sample ID: 400-134758-10

Date Collected: 03/02/17 13:30

Matrix: Water

Date Received: 03/04/17 08:36

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.9		1.0	0.89	mg/L			03/09/17 20:46	1
Fluoride	0.28	B	0.20	0.082	mg/L			03/09/17 20:46	1
Sulfate	4.6		1.0	0.70	mg/L			03/09/17 20:46	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		03/06/17 10:55	03/08/17 16:04	5
Arsenic	0.00082	J	0.0013	0.00046	mg/L		03/06/17 10:55	03/08/17 16:04	5
Barium	0.040		0.0025	0.00049	mg/L		03/06/17 10:55	03/08/17 16:04	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 16:04	5
Boron	0.064		0.050	0.021	mg/L		03/06/17 10:55	03/08/17 16:04	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 16:04	5
Calcium	26		0.25	0.13	mg/L		03/06/17 10:55	03/08/17 16:04	5
Chromium	0.0032		0.0025	0.0011	mg/L		03/06/17 10:55	03/08/17 16:04	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/06/17 10:55	03/08/17 16:04	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		03/06/17 10:55	03/08/17 16:04	5
Lithium	0.015		0.0050	0.0032	mg/L		03/06/17 10:55	03/08/17 16:04	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:55	03/08/17 16:04	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:55	03/08/17 16:04	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:55	03/08/17 16:04	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/06/17 09:01	03/10/17 14:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	170		5.0	3.4	mg/L			03/07/17 14:44	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-1
 SDG: Ash Pond

Client Sample ID: DUP-1

Date Collected: 03/02/17 00:00

Date Received: 03/04/17 08:36

Lab Sample ID: 400-134758-11

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		1.0	0.89	mg/L			03/09/17 21:09	1
Fluoride	0.37	B	0.20	0.082	mg/L			03/09/17 21:09	1
Sulfate	170		5.0	3.5	mg/L			03/10/17 15:24	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		03/06/17 10:55	03/08/17 16:09	5
Arsenic	0.00090	J	0.0013	0.00046	mg/L		03/06/17 10:55	03/08/17 16:09	5
Barium	0.014		0.0025	0.00049	mg/L		03/06/17 10:55	03/08/17 16:09	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 16:09	5
Boron	1.3		0.050	0.021	mg/L		03/06/17 10:55	03/08/17 16:09	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 16:09	5
Calcium	52		0.25	0.13	mg/L		03/06/17 10:55	03/08/17 16:09	5
Chromium	0.0035		0.0025	0.0011	mg/L		03/06/17 10:55	03/08/17 16:09	5
Cobalt	0.012		0.0025	0.00040	mg/L		03/06/17 10:55	03/08/17 16:09	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		03/06/17 10:55	03/08/17 16:09	5
Lithium	0.13		0.0050	0.0032	mg/L		03/06/17 10:55	03/08/17 16:09	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:55	03/08/17 16:09	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:55	03/08/17 16:09	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:55	03/08/17 16:09	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		03/06/17 09:01	03/10/17 14:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	340		5.0	3.4	mg/L			03/08/17 13:51	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Client Sample ID: FB-1
Date Collected: 03/02/17 12:45
Date Received: 03/04/17 08:36

Lab Sample ID: 400-134758-12
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			03/09/17 21:31	1
Fluoride	0.085	J B	0.20	0.082	mg/L			03/09/17 21:31	1
Sulfate	<0.70		1.0	0.70	mg/L			03/09/17 21:31	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		03/06/17 10:55	03/08/17 16:13	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:55	03/08/17 16:13	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/06/17 10:55	03/08/17 16:13	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 16:13	5
Boron	0.024	J	0.050	0.021	mg/L		03/06/17 10:55	03/08/17 16:13	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 16:13	5
Calcium	<0.13		0.25	0.13	mg/L		03/06/17 10:55	03/08/17 16:13	5
Chromium	0.0033		0.0025	0.0011	mg/L		03/06/17 10:55	03/08/17 16:13	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/06/17 10:55	03/08/17 16:13	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		03/06/17 10:55	03/08/17 16:13	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:55	03/08/17 16:13	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:55	03/08/17 16:13	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:55	03/08/17 16:13	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:55	03/08/17 16:13	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		03/06/17 09:01	03/10/17 14:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			03/08/17 13:51	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Client Sample ID: FERB-1

Date Collected: 03/02/17 12:55

Date Received: 03/04/17 08:36

Lab Sample ID: 400-134758-13

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			03/09/17 21:54	1
Fluoride	0.085	J B	0.20	0.082	mg/L			03/09/17 21:54	1
Sulfate	<0.70		1.0	0.70	mg/L			03/09/17 21:54	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		03/06/17 10:55	03/08/17 16:18	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:55	03/08/17 16:18	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/06/17 10:55	03/08/17 16:18	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 16:18	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:55	03/08/17 16:18	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 16:18	5
Calcium	<0.13		0.25	0.13	mg/L		03/06/17 10:55	03/08/17 16:18	5
Chromium	0.0033		0.0025	0.0011	mg/L		03/06/17 10:55	03/08/17 16:18	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/06/17 10:55	03/08/17 16:18	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		03/06/17 10:55	03/08/17 16:18	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:55	03/08/17 16:18	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:55	03/08/17 16:18	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:55	03/08/17 16:18	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:55	03/08/17 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		03/06/17 09:01	03/10/17 15:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<3.4		5.0	3.4	mg/L			03/08/17 13:51	1

Definitions/Glossary

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Qualifiers

HPLC/IC

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.

Metals

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Client Sample ID: MGWA-10

Date Collected: 03/02/17 09:30

Date Received: 03/04/17 08:36

Lab Sample ID: 400-134758-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345156	03/09/17 16:12	KH1	TAL PEN
Total Recoverable	Prep	3005A			344597	03/06/17 10:55	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	345106	03/08/17 15:05	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344597	03/06/17 10:55	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	345240	03/09/17 14:02	DRE	TAL PEN
Total/NA	Prep	7470A			344583	03/06/17 09:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345347	03/10/17 15:41	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344813	03/07/17 14:44	TET	TAL PEN

Client Sample ID: MGWA-11

Date Collected: 03/02/17 09:30

Date Received: 03/04/17 08:36

Lab Sample ID: 400-134758-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345156	03/09/17 16:35	KH1	TAL PEN
Total Recoverable	Prep	3005A			344597	03/06/17 10:55	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	345106	03/08/17 15:10	DRE	TAL PEN
Total/NA	Prep	7470A			344583	03/06/17 09:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345347	03/10/17 15:42	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344813	03/07/17 14:44	TET	TAL PEN

Client Sample ID: MGWA-5

Date Collected: 03/02/17 10:45

Date Received: 03/04/17 08:36

Lab Sample ID: 400-134758-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345156	03/09/17 16:58	KH1	TAL PEN
Total Recoverable	Prep	3005A			344597	03/06/17 10:55	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	345106	03/08/17 15:14	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344597	03/06/17 10:55	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	345240	03/09/17 14:24	DRE	TAL PEN
Total/NA	Prep	7470A			344583	03/06/17 09:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345347	03/10/17 15:43	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344813	03/07/17 14:44	TET	TAL PEN

Client Sample ID: MGWA-6

Date Collected: 03/02/17 10:45

Date Received: 03/04/17 08:36

Lab Sample ID: 400-134758-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345156	03/09/17 18:06	KH1	TAL PEN
Total Recoverable	Prep	3005A			344597	03/06/17 10:55	RJB	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Client Sample ID: MGWA-6

Lab Sample ID: 400-134758-4

Date Collected: 03/02/17 10:45

Matrix: Water

Date Received: 03/04/17 08:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020		5	345106	03/08/17 15:19	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344597	03/06/17 10:55	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	345240	03/09/17 14:29	DRE	TAL PEN
Total/NA	Prep	7470A			344583	03/06/17 09:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345347	03/10/17 15:44	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344813	03/07/17 14:44	TET	TAL PEN

Client Sample ID: MGWC-7

Lab Sample ID: 400-134758-5

Date Collected: 03/02/17 11:02

Matrix: Water

Date Received: 03/04/17 08:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345156	03/09/17 17:21	KH1	TAL PEN
Total/NA	Analysis	300.0		5	345266	03/10/17 11:59	KH1	TAL PEN
Total Recoverable	Prep	3005A			344597	03/06/17 10:55	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	345106	03/08/17 15:24	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344597	03/06/17 10:55	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	345240	03/09/17 14:33	DRE	TAL PEN
Total/NA	Prep	7470A			344583	03/06/17 09:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345347	03/10/17 15:46	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344813	03/07/17 14:44	TET	TAL PEN

Client Sample ID: MGWC-8

Lab Sample ID: 400-134758-6

Date Collected: 03/02/17 12:05

Matrix: Water

Date Received: 03/04/17 08:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345156	03/09/17 18:29	KH1	TAL PEN
Total/NA	Analysis	300.0		5	345266	03/10/17 13:07	KH1	TAL PEN
Total Recoverable	Prep	3005A			344597	03/06/17 10:55	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	345106	03/08/17 15:28	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		344597	03/06/17 10:55	RJB	TAL PEN
Total Recoverable	Analysis	6020	DL	25	345106	03/08/17 16:23	DRE	TAL PEN
Total Recoverable	Prep	3005A	RA		344597	03/06/17 10:55	RJB	TAL PEN
Total Recoverable	Analysis	6020	RA	5	345240	03/09/17 14:38	DRE	TAL PEN
Total/NA	Prep	7470A			344583	03/06/17 09:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345347	03/10/17 15:47	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344813	03/07/17 14:44	TET	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Client Sample ID: MGWC-1

Lab Sample ID: 400-134758-7

Date Collected: 03/02/17 12:00

Matrix: Water

Date Received: 03/04/17 08:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345156	03/09/17 19:37	KH1	TAL PEN
Total/NA	Analysis	300.0		5	345266	03/10/17 13:30	KH1	TAL PEN
Total Recoverable	Prep	3005A			344597	03/06/17 10:55	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	345106	03/08/17 15:51	DRE	TAL PEN
Total/NA	Prep	7470A			344583	03/06/17 09:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345347	03/10/17 15:48	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344813	03/07/17 14:44	TET	TAL PEN

Client Sample ID: MGWC-3

Lab Sample ID: 400-134758-8

Date Collected: 03/02/17 12:35

Matrix: Water

Date Received: 03/04/17 08:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345156	03/09/17 20:00	KH1	TAL PEN
Total/NA	Analysis	300.0		5	345266	03/10/17 13:53	KH1	TAL PEN
Total Recoverable	Prep	3005A			344597	03/06/17 10:55	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	345106	03/08/17 15:55	DRE	TAL PEN
Total/NA	Prep	7470A			344583	03/06/17 09:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345347	03/10/17 15:49	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344813	03/07/17 14:44	TET	TAL PEN

Client Sample ID: MGWC-2

Lab Sample ID: 400-134758-9

Date Collected: 03/02/17 13:30

Matrix: Water

Date Received: 03/04/17 08:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345156	03/09/17 20:23	KH1	TAL PEN
Total/NA	Analysis	300.0		5	345266	03/10/17 14:16	KH1	TAL PEN
Total Recoverable	Prep	3005A			344597	03/06/17 10:55	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	345106	03/08/17 16:00	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		344597	03/06/17 10:55	RJB	TAL PEN
Total Recoverable	Analysis	6020	DL	25	345106	03/08/17 16:27	DRE	TAL PEN
Total/NA	Prep	7470A			344583	03/06/17 09:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345347	03/10/17 14:55	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344813	03/07/17 14:44	TET	TAL PEN

Client Sample ID: MGWC-12

Lab Sample ID: 400-134758-10

Date Collected: 03/02/17 13:30

Matrix: Water

Date Received: 03/04/17 08:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345156	03/09/17 20:46	KH1	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Client Sample ID: MGWC-12

Lab Sample ID: 400-134758-10

Date Collected: 03/02/17 13:30

Matrix: Water

Date Received: 03/04/17 08:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			344597	03/06/17 10:55	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	345106	03/08/17 16:04	DRE	TAL PEN
Total/NA	Prep	7470A			344583	03/06/17 09:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345347	03/10/17 14:56	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	344813	03/07/17 14:44	TET	TAL PEN

Client Sample ID: DUP-1

Lab Sample ID: 400-134758-11

Date Collected: 03/02/17 00:00

Matrix: Water

Date Received: 03/04/17 08:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345156	03/09/17 21:09	KH1	TAL PEN
Total/NA	Analysis	300.0		5	345266	03/10/17 15:24	KH1	TAL PEN
Total Recoverable	Prep	3005A			344597	03/06/17 10:55	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	345106	03/08/17 16:09	DRE	TAL PEN
Total/NA	Prep	7470A			344583	03/06/17 09:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345347	03/10/17 14:57	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	345001	03/08/17 13:51	TET	TAL PEN

Client Sample ID: FB-1

Lab Sample ID: 400-134758-12

Date Collected: 03/02/17 12:45

Matrix: Water

Date Received: 03/04/17 08:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345156	03/09/17 21:31	KH1	TAL PEN
Total Recoverable	Prep	3005A			344597	03/06/17 10:55	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	345106	03/08/17 16:13	DRE	TAL PEN
Total/NA	Prep	7470A			344583	03/06/17 09:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345347	03/10/17 14:58	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	345001	03/08/17 13:51	TET	TAL PEN

Client Sample ID: FERB-1

Lab Sample ID: 400-134758-13

Date Collected: 03/02/17 12:55

Matrix: Water

Date Received: 03/04/17 08:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	345156	03/09/17 21:54	KH1	TAL PEN
Total Recoverable	Prep	3005A			344597	03/06/17 10:55	RJB	TAL PEN
Total Recoverable	Analysis	6020		5	345106	03/08/17 16:18	DRE	TAL PEN
Total/NA	Prep	7470A			344583	03/06/17 09:01	JAP	TAL PEN
Total/NA	Analysis	7470A		1	345347	03/10/17 15:00	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	345001	03/08/17 13:51	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-134758-1
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 McIntosh

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

HPLC/IC

Analysis Batch: 345156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134758-1	MGWA-10	Total/NA	Water	300.0	
400-134758-2	MGWA-11	Total/NA	Water	300.0	
400-134758-3	MGWA-5	Total/NA	Water	300.0	
400-134758-4	MGWA-6	Total/NA	Water	300.0	
400-134758-5	MGWC-7	Total/NA	Water	300.0	
400-134758-6	MGWC-8	Total/NA	Water	300.0	
400-134758-7	MGWC-1	Total/NA	Water	300.0	
400-134758-8	MGWC-3	Total/NA	Water	300.0	
400-134758-9	MGWC-2	Total/NA	Water	300.0	
400-134758-10	MGWC-12	Total/NA	Water	300.0	
400-134758-11	DUP-1	Total/NA	Water	300.0	
400-134758-12	FB-1	Total/NA	Water	300.0	
400-134758-13	FERB-1	Total/NA	Water	300.0	
MB 400-345156/4	Method Blank	Total/NA	Water	300.0	
LCS 400-345156/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-345156/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-134725-B-5 MS	Matrix Spike	Total/NA	Water	300.0	
400-134725-B-5 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 345266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134758-5	MGWC-7	Total/NA	Water	300.0	
400-134758-6	MGWC-8	Total/NA	Water	300.0	
400-134758-7	MGWC-1	Total/NA	Water	300.0	
400-134758-8	MGWC-3	Total/NA	Water	300.0	
400-134758-9	MGWC-2	Total/NA	Water	300.0	
400-134758-11	DUP-1	Total/NA	Water	300.0	
MB 400-345266/35	Method Blank	Total/NA	Water	300.0	
LCS 400-345266/36	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-345266/37	Lab Control Sample Dup	Total/NA	Water	300.0	
400-134758-5 MS	MGWC-7	Total/NA	Water	300.0	
400-134758-5 MSD	MGWC-7	Total/NA	Water	300.0	

Metals

Prep Batch: 344583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134758-1	MGWA-10	Total/NA	Water	7470A	
400-134758-2	MGWA-11	Total/NA	Water	7470A	
400-134758-3	MGWA-5	Total/NA	Water	7470A	
400-134758-4	MGWA-6	Total/NA	Water	7470A	
400-134758-5	MGWC-7	Total/NA	Water	7470A	
400-134758-6	MGWC-8	Total/NA	Water	7470A	
400-134758-7	MGWC-1	Total/NA	Water	7470A	
400-134758-8	MGWC-3	Total/NA	Water	7470A	
400-134758-9	MGWC-2	Total/NA	Water	7470A	
400-134758-10	MGWC-12	Total/NA	Water	7470A	
400-134758-11	DUP-1	Total/NA	Water	7470A	
400-134758-12	FB-1	Total/NA	Water	7470A	
400-134758-13	FERB-1	Total/NA	Water	7470A	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-134758-1
 SDG: Ash Pond

Metals (Continued)

Prep Batch: 344583 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-344583/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-344583/15-A	Lab Control Sample	Total/NA	Water	7470A	
440-178202-B-2-C MS	Matrix Spike	Total/NA	Water	7470A	
440-178202-B-2-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 344597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134758-1 - RA	MGWA-10	Total Recoverable	Water	3005A	
400-134758-1	MGWA-10	Total Recoverable	Water	3005A	
400-134758-2	MGWA-11	Total Recoverable	Water	3005A	
400-134758-3	MGWA-5	Total Recoverable	Water	3005A	
400-134758-3 - RA	MGWA-5	Total Recoverable	Water	3005A	
400-134758-4 - RA	MGWA-6	Total Recoverable	Water	3005A	
400-134758-4	MGWA-6	Total Recoverable	Water	3005A	
400-134758-5 - RA	MGWC-7	Total Recoverable	Water	3005A	
400-134758-5	MGWC-7	Total Recoverable	Water	3005A	
400-134758-6 - RA	MGWC-8	Total Recoverable	Water	3005A	
400-134758-6 - DL	MGWC-8	Total Recoverable	Water	3005A	
400-134758-6	MGWC-8	Total Recoverable	Water	3005A	
400-134758-7	MGWC-1	Total Recoverable	Water	3005A	
400-134758-8	MGWC-3	Total Recoverable	Water	3005A	
400-134758-9	MGWC-2	Total Recoverable	Water	3005A	
400-134758-9 - DL	MGWC-2	Total Recoverable	Water	3005A	
400-134758-10	MGWC-12	Total Recoverable	Water	3005A	
400-134758-11	DUP-1	Total Recoverable	Water	3005A	
400-134758-12	FB-1	Total Recoverable	Water	3005A	
400-134758-13	FERB-1	Total Recoverable	Water	3005A	
MB 400-344597/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
MB 400-344597/1-A ^5 - RA	Method Blank	Total Recoverable	Water	3005A	
LCS 400-344597/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 400-344597/2-A - RA	Lab Control Sample	Total Recoverable	Water	3005A	
400-134634-B-2-E MS ^5 - R	Matrix Spike	Total Recoverable	Water	3005A	
400-134634-B-2-E MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-134634-B-2-F MSD ^5 -	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
400-134634-B-2-F MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 345106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134758-1	MGWA-10	Total Recoverable	Water	6020	344597
400-134758-2	MGWA-11	Total Recoverable	Water	6020	344597
400-134758-3	MGWA-5	Total Recoverable	Water	6020	344597
400-134758-4	MGWA-6	Total Recoverable	Water	6020	344597
400-134758-5	MGWC-7	Total Recoverable	Water	6020	344597
400-134758-6	MGWC-8	Total Recoverable	Water	6020	344597
400-134758-6 - DL	MGWC-8	Total Recoverable	Water	6020	344597
400-134758-7	MGWC-1	Total Recoverable	Water	6020	344597
400-134758-8	MGWC-3	Total Recoverable	Water	6020	344597
400-134758-9	MGWC-2	Total Recoverable	Water	6020	344597
400-134758-9 - DL	MGWC-2	Total Recoverable	Water	6020	344597
400-134758-10	MGWC-12	Total Recoverable	Water	6020	344597
400-134758-11	DUP-1	Total Recoverable	Water	6020	344597

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Metals (Continued)

Analysis Batch: 345106 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134758-12	FB-1	Total Recoverable	Water	6020	344597
400-134758-13	FERB-1	Total Recoverable	Water	6020	344597
MB 400-344597/1-A ^5	Method Blank	Total Recoverable	Water	6020	344597
LCS 400-344597/2-A	Lab Control Sample	Total Recoverable	Water	6020	344597
400-134634-B-2-E MS ^5	Matrix Spike	Total Recoverable	Water	6020	344597
400-134634-B-2-F MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	344597

Analysis Batch: 345240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134758-1 - RA	MGWA-10	Total Recoverable	Water	6020	344597
400-134758-3 - RA	MGWA-5	Total Recoverable	Water	6020	344597
400-134758-4 - RA	MGWA-6	Total Recoverable	Water	6020	344597
400-134758-5 - RA	MGWC-7	Total Recoverable	Water	6020	344597
400-134758-6 - RA	MGWC-8	Total Recoverable	Water	6020	344597
MB 400-344597/1-A ^5 - RA	Method Blank	Total Recoverable	Water	6020	344597
LCS 400-344597/2-A - RA	Lab Control Sample	Total Recoverable	Water	6020	344597
400-134634-B-2-E MS ^5 - R	Matrix Spike	Total Recoverable	Water	6020	344597
400-134634-B-2-F MSD ^5 -	Matrix Spike Duplicate	Total Recoverable	Water	6020	344597

Analysis Batch: 345334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-344597/2-A	Lab Control Sample	Total Recoverable	Water	6020	344597

Analysis Batch: 345347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134758-1	MGWA-10	Total/NA	Water	7470A	344583
400-134758-2	MGWA-11	Total/NA	Water	7470A	344583
400-134758-3	MGWA-5	Total/NA	Water	7470A	344583
400-134758-4	MGWA-6	Total/NA	Water	7470A	344583
400-134758-5	MGWC-7	Total/NA	Water	7470A	344583
400-134758-6	MGWC-8	Total/NA	Water	7470A	344583
400-134758-7	MGWC-1	Total/NA	Water	7470A	344583
400-134758-8	MGWC-3	Total/NA	Water	7470A	344583
400-134758-9	MGWC-2	Total/NA	Water	7470A	344583
400-134758-10	MGWC-12	Total/NA	Water	7470A	344583
400-134758-11	DUP-1	Total/NA	Water	7470A	344583
400-134758-12	FB-1	Total/NA	Water	7470A	344583
400-134758-13	FERB-1	Total/NA	Water	7470A	344583
MB 400-344583/14-A	Method Blank	Total/NA	Water	7470A	344583
LCS 400-344583/15-A	Lab Control Sample	Total/NA	Water	7470A	344583
440-178202-B-2-C MS	Matrix Spike	Total/NA	Water	7470A	344583
440-178202-B-2-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	344583

General Chemistry

Analysis Batch: 344813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134758-1	MGWA-10	Total/NA	Water	SM 2540C	
400-134758-2	MGWA-11	Total/NA	Water	SM 2540C	
400-134758-3	MGWA-5	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

General Chemistry (Continued)

Analysis Batch: 344813 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134758-4	MGWA-6	Total/NA	Water	SM 2540C	
400-134758-5	MGWC-7	Total/NA	Water	SM 2540C	
400-134758-6	MGWC-8	Total/NA	Water	SM 2540C	
400-134758-7	MGWC-1	Total/NA	Water	SM 2540C	
400-134758-8	MGWC-3	Total/NA	Water	SM 2540C	
400-134758-9	MGWC-2	Total/NA	Water	SM 2540C	
400-134758-10	MGWC-12	Total/NA	Water	SM 2540C	
MB 400-344813/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-344813/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-134758-1 DU	MGWA-10	Total/NA	Water	SM 2540C	

Analysis Batch: 345001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134758-11	DUP-1	Total/NA	Water	SM 2540C	
400-134758-12	FB-1	Total/NA	Water	SM 2540C	
400-134758-13	FERB-1	Total/NA	Water	SM 2540C	
MB 400-345001/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-345001/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-134749-G-22 DU	Duplicate	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-345156/4
Matrix: Water
Analysis Batch: 345156

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			03/09/17 10:52	1
Fluoride	0.0853	J	0.20	0.082	mg/L			03/09/17 10:52	1
Sulfate	<0.70		1.0	0.70	mg/L			03/09/17 10:52	1

Lab Sample ID: LCS 400-345156/5
Matrix: Water
Analysis Batch: 345156

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	10.2		mg/L		102	90 - 110

Lab Sample ID: LCSD 400-345156/6
Matrix: Water
Analysis Batch: 345156

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	9.99		mg/L		100	90 - 110	0	15
Fluoride	10.0	10.3		mg/L		103	90 - 110	1	15
Sulfate	10.0	10.1		mg/L		101	90 - 110	2	15

Lab Sample ID: 400-134725-B-5 MS
Matrix: Water
Analysis Batch: 345156

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	3.4		10.0	14.1		mg/L		107	80 - 120
Fluoride	0.088	J B	10.0	10.7		mg/L		106	80 - 120
Sulfate	0.71	J	10.0	11.3		mg/L		106	80 - 120

Lab Sample ID: 400-134725-B-5 MSD
Matrix: Water
Analysis Batch: 345156

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	3.4		10.0	14.1		mg/L		107	80 - 120	0	20
Fluoride	0.088	J B	10.0	10.8		mg/L		107	80 - 120	0	20
Sulfate	0.71	J	10.0	11.2		mg/L		105	80 - 120	1	20

Lab Sample ID: MB 400-345266/35
Matrix: Water
Analysis Batch: 345266

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			03/10/17 10:50	1
Fluoride	0.0852	J	0.20	0.082	mg/L			03/10/17 10:50	1
Sulfate	<0.70		1.0	0.70	mg/L			03/10/17 10:50	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 400-345266/36
Matrix: Water
Analysis Batch: 345266

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	10.2		mg/L		102	90 - 110

Lab Sample ID: LCSD 400-345266/37
Matrix: Water
Analysis Batch: 345266

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	10.3		mg/L		103	90 - 110	0	15
Sulfate	10.0	10.2		mg/L		102	90 - 110	0	15

Lab Sample ID: 400-134758-5 MS
Matrix: Water
Analysis Batch: 345266

Client Sample ID: MGWC-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12		50.0	61.0		mg/L		98	80 - 120
Fluoride	0.73	J B	50.0	50.6		mg/L		100	80 - 120
Sulfate	180		50.0	223		mg/L		89	80 - 120

Lab Sample ID: 400-134758-5 MSD
Matrix: Water
Analysis Batch: 345266

Client Sample ID: MGWC-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	12		50.0	61.1		mg/L		99	80 - 120	0	20
Fluoride	0.73	J B	50.0	50.5		mg/L		99	80 - 120	0	20
Sulfate	180		50.0	223		mg/L		90	80 - 120	0	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-344597/1-A ^5
Matrix: Water
Analysis Batch: 345106

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 344597

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010	^	0.0025	0.0010	mg/L		03/06/17 10:55	03/08/17 13:58	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		03/06/17 10:55	03/08/17 13:58	5
Barium	<0.00049		0.0025	0.00049	mg/L		03/06/17 10:55	03/08/17 13:58	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 13:58	5
Boron	<0.021		0.050	0.021	mg/L		03/06/17 10:55	03/08/17 13:58	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		03/06/17 10:55	03/08/17 13:58	5
Calcium	<0.13		0.25	0.13	mg/L		03/06/17 10:55	03/08/17 13:58	5
Chromium	<0.0011		0.0025	0.0011	mg/L		03/06/17 10:55	03/08/17 13:58	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		03/06/17 10:55	03/08/17 13:58	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		03/06/17 10:55	03/08/17 13:58	5
Lithium	<0.0032		0.0050	0.0032	mg/L		03/06/17 10:55	03/08/17 13:58	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

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

Lab Sample ID: MB 400-344597/1-A ^5
Matrix: Water
Analysis Batch: 345106

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 344597

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	<0.00085		0.015	0.00085	mg/L		03/06/17 10:55	03/08/17 13:58	5
Selenium	<0.00024		0.0013	0.00024	mg/L		03/06/17 10:55	03/08/17 13:58	5
Thallium	<0.000085		0.00050	0.000085	mg/L		03/06/17 10:55	03/08/17 13:58	5

Lab Sample ID: LCS 400-344597/2-A
Matrix: Water
Analysis Batch: 345106

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 344597

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.106	^ *	mg/L		212	80 - 120
Arsenic	0.0500	0.0528		mg/L		106	80 - 120
Barium	0.0500	0.0533		mg/L		107	80 - 120
Beryllium	0.0500	0.0514		mg/L		103	80 - 120
Boron	0.100	0.0993		mg/L		99	80 - 120
Cadmium	0.0500	0.0527		mg/L		105	80 - 120
Calcium	5.00	4.99		mg/L		100	80 - 120
Chromium	0.0500	0.0466		mg/L		93	80 - 120
Cobalt	0.0500	0.0548		mg/L		110	80 - 120
Lead	0.0500	0.0591	^	mg/L		118	80 - 120
Lithium	0.0500	0.0529		mg/L		106	80 - 120
Molybdenum	0.100	0.106		mg/L		106	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: LCS 400-344597/2-A
Matrix: Water
Analysis Batch: 345334

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 344597

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.0500	0.0572		mg/L		114	80 - 120

Lab Sample ID: 400-134634-B-2-E MS ^5
Matrix: Water
Analysis Batch: 345106

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 344597

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	<0.00046		0.0500	0.0545		mg/L		109	75 - 125
Barium	0.087		0.0500	0.141		mg/L		110	75 - 125
Beryllium	<0.00034		0.0500	0.0529		mg/L		106	75 - 125
Boron	0.13		0.100	0.241		mg/L		109	75 - 125
Cadmium	<0.00034		0.0500	0.0544		mg/L		109	75 - 125
Chromium	0.0038		0.0500	0.0554		mg/L		103	75 - 125
Cobalt	0.00047	J	0.0500	0.0599		mg/L		119	75 - 125
Lithium	<0.0032		0.0500	0.0525		mg/L		105	75 - 125
Molybdenum	0.0012	J	0.100	0.114		mg/L		112	75 - 125
Selenium	<0.00024		0.0500	0.0567		mg/L		113	75 - 125
Thallium	0.00011	J	0.0100	0.0109		mg/L		107	75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

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

Lab Sample ID: 400-134634-B-2-F MSD ^5

Matrix: Water

Analysis Batch: 345106

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total Recoverable

Prep Batch: 344597

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
Arsenic	<0.00046		0.0500	0.0535		mg/L		107	75 - 125	2	20	
Barium	0.087		0.0500	0.140		mg/L		107	75 - 125	1	20	
Beryllium	<0.00034		0.0500	0.0522		mg/L		104	75 - 125	1	20	
Boron	0.13		0.100	0.232		mg/L		100	75 - 125	4	20	
Cadmium	<0.00034		0.0500	0.0529		mg/L		106	75 - 125	3	20	
Chromium	0.0038		0.0500	0.0529		mg/L		98	75 - 125	4	20	
Cobalt	0.00047	J	0.0500	0.0582		mg/L		115	75 - 125	3	20	
Lithium	<0.0032		0.0500	0.0530		mg/L		106	75 - 125	1	20	
Molybdenum	0.0012	J	0.100	0.102		mg/L		100	75 - 125	11	20	
Selenium	<0.00024		0.0500	0.0508		mg/L		102	75 - 125	11	20	
Thallium	0.00011	J	0.0100	0.0108		mg/L		107	75 - 125	1	20	

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

Lab Sample ID: MB 400-344597/1-A ^5

Matrix: Water

Analysis Batch: 345240

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 344597

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony - RA	<0.0010	^	0.0025	0.0010	mg/L		03/06/17 10:55	03/09/17 13:21	5
Lead - RA	<0.00035		0.0013	0.00035	mg/L		03/06/17 10:55	03/09/17 13:21	5

Lab Sample ID: LCS 400-344597/2-A

Matrix: Water

Analysis Batch: 345240

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 344597

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	RPD
Antimony - RA	0.0500	0.0984	^ *	mg/L		197	80 - 120	
Lead - RA	0.0500	0.0550		mg/L		110	80 - 120	

Lab Sample ID: 400-134634-B-2-E MS ^5

Matrix: Water

Analysis Batch: 345240

Client Sample ID: Matrix Spike

Prep Type: Total Recoverable

Prep Batch: 344597

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec.	
				Result	Qualifier				Limits	RPD
Lead - RA	0.00050	J	0.0500	0.0510		mg/L		101	75 - 125	

Lab Sample ID: 400-134634-B-2-F MSD ^5

Matrix: Water

Analysis Batch: 345240

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total Recoverable

Prep Batch: 344597

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
Lead - RA	0.00050	J	0.0500	0.0502		mg/L		99	75 - 125	2	20	

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-134758-1
SDG: Ash Pond

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-344583/14-A
Matrix: Water
Analysis Batch: 345347

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 344583

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		03/06/17 08:54	03/10/17 15:21	1

Lab Sample ID: LCS 400-344583/15-A
Matrix: Water
Analysis Batch: 345347

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 344583

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.000952		mg/L		95	80 - 120

Lab Sample ID: 440-178202-B-2-C MS
Matrix: Water
Analysis Batch: 345347

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 344583

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00201		mg/L		100	80 - 120

Lab Sample ID: 440-178202-B-2-D MSD
Matrix: Water
Analysis Batch: 345347

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 344583

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00203		mg/L		101	80 - 120	1	20

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

Lab Sample ID: MB 400-344813/1
Matrix: Water
Analysis Batch: 344813

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			03/07/17 14:44	1

Lab Sample ID: LCS 400-344813/2
Matrix: Water
Analysis Batch: 344813

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: 400-134758-1 DU
Matrix: Water
Analysis Batch: 344813

Client Sample ID: MGWA-10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	78		78.0		mg/L		0	5

QC Sample Results

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

TestAmerica Job ID: 400-134758-1
 SDG: Ash Pond

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

Lab Sample ID: MB 400-345001/1
Matrix: Water
Analysis Batch: 345001

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			03/08/17 13:51	1

Lab Sample ID: LCS 400-345001/2
Matrix: Water
Analysis Batch: 345001

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: 400-134749-G-22 DU
Matrix: Water
Analysis Batch: 345001

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	390		386		mg/L		0.5	5


Chain of Custody Record

Client Information
 Company: Southern Company
 Address: 241 Ralph McGill Blvd SE B10185
 City: Atlanta
 State, Zip: GA, 30308
 Phone: 404-506-7239
 Email: JIMPELTY@southernco.com
 Project Name: Plant McIntosh - Ash Pond
 Site: COR

Sampler: M. Burch M. B. M. Thomas M. T. Payne J.P.
 W. Vigo W.F.V.
 Lab PM: Whitney, Cheyenne R.
 E-Mail: cheyenne.whitire@testamericainc.com

Carrier Tracking No(s):
 Page: 1 of 2
 Job #:

Due Date Requested:
 TAT Requested (days):
 PO #:
 WO #:
 Project #:
 SSON#:

Analysis Requested
 400-134758 COC

 Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470
 Radium 226 & 228 - SW-846 9315 & 9320
 TDS - SM 2540C ; Cl₂, SO₄ - EPA 300
 Performance (MS/SP/VS/OP/NO)
 Lead Filtered Sample (Yes or No)

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=Solid, G=Grab)	Preservation Code	Total Number of Containers	Special Instructions/Note
M G W A - 10	3/2/17	0930	G	W			
M G W A - 11	3/2/17	0930	G	W			
M G W A - 5	3/2/17	1045	G	W			
M G W A - 6	3/2/17	1045	G	W			
M G W C - 7	3/2/17	1102	G	W			
M G W C - 8	3/2/17	1205	G	W			
M G W C - 1	3/2/17	1200	G	W			
M G W C - 3	3/2/17	1255	G	W			
M G W C - 2	3/2/17	1330	G	W			
M G W C - 12	3/2/17	1330	G	W			
DUP - 1	3/2/17	---	G	W			2nd Reading Not Collected (Lots of Back)

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 - As₂O₃
 P - Na₂O₄S
 Q - Na₂SO₃
 R - Na₂SO₃
 S - H₂SO₄
 T - TSP Dodecahydrate
 U - Acetone
 V - MCAA
 W - pH 4-5
 X - other (specify)

Special Instructions/Note:
 2nd Reading Not Collected (Lots of Back)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Deliverable Requested: Flammable Skin Irritant Poison B Unknown Radiological

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: *Will King (ERM)* Date/Time: 3/3/17 1200 Company: _____
 Relinquished by: *[Signature]* Date/Time: 3-3-17 1201 Company: _____
 Relinquished by: *[Signature]* Date/Time: _____ Company: _____
 Custody Seal No.: _____
 Δ Yes Δ No
 Cooler Temperature(s) and Other Remarks: *2.2°C IR 2*



Chain of Custody Record

Client Information Company: Southern Company Address: 241 Ralph McGill Blvd SE B10185 City: Atlanta State, Zip: GA, 30308 Phone: 404-506-7239 Email: LMPEITY@southernco.com Project Name: Plant McIntosh - Ash Pond Site: CCR		Sampler: M. Burch M. B. M. Thomas M. T. T. Payne J.P. Lab PM: Whitmire, Cheyenne R. E-Mail: cheyenne.whitmire@testamericainc.com		Carrier Tracking No(s): Page: 2 of 2 Job #:	
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 - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetane 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=soil, L=liquid, T=tissue, A=air) Preservation Code		Special Instructions/Note: Total Number of Containers			
FB-1 FEB-1		3/2/17 1245 G W		2 W	
TDS - SM 2540C : Cl ₂ F ₂ SO ₄ - EPA 300 Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470 Radium 226 & 228 - SW-846 9315 & 9320					
Possible Hazard Identification <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)					
Sample Disposal (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 <input type="checkbox"/> Archive For _____ Months					
Special Instructions/OC Requirements: Empty Kit Relinquished by: _____ Date: _____ Relinquished by: <i>Willie (ERS)</i> Date/Time: 3/3/17 1200 Company: PA Relinquished by: _____ Date/Time: 3-3-17 1201 Company: PA Relinquished by: _____ Date/Time: _____ Company: _____					
Cooler Temperature(s) °C and Other Remarks:					



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-134758-1

SDG Number: Ash Pond

Login Number: 134758

List Number: 1

Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.4°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	



Certification Summary

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

TestAmerica Job ID: 400-134758-1
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: 400-134758-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR - Plant McIntosh

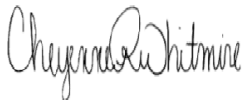
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

3/31/2017 5:07:31 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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

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

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

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Method Summary

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

TestAmerica Job ID: 400-134758-2
SDG: Ash Pond

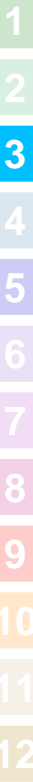
Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

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 McIntosh

TestAmerica Job ID: 400-134758-2
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-134758-1	MGWA-10	Water	03/02/17 09:30	03/04/17 08:36
400-134758-2	MGWA-11	Water	03/02/17 09:30	03/04/17 08:36
400-134758-3	MGWA-5	Water	03/02/17 10:45	03/04/17 08:36
400-134758-4	MGWA-6	Water	03/02/17 10:45	03/04/17 08:36
400-134758-5	MGWC-7	Water	03/02/17 11:02	03/04/17 08:36
400-134758-6	MGWC-8	Water	03/02/17 12:05	03/04/17 08:36
400-134758-7	MGWC-1	Water	03/02/17 12:00	03/04/17 08:36
400-134758-8	MGWC-3	Water	03/02/17 12:35	03/04/17 08:36
400-134758-9	MGWC-2	Water	03/02/17 13:30	03/04/17 08:36
400-134758-10	MGWC-12	Water	03/02/17 13:30	03/04/17 08:36
400-134758-11	DUP-1	Water	03/02/17 00:00	03/04/17 08:36
400-134758-12	FB-1	Water	03/02/17 12:45	03/04/17 08:36
400-134758-13	FERB-1	Water	03/02/17 12:55	03/04/17 08:36

Client Sample Results

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

TestAmerica Job ID: 400-134758-2
 SDG: Ash Pond

Client Sample ID: MGWA-10

Date Collected: 03/02/17 09:30

Date Received: 03/04/17 08:36

Lab Sample ID: 400-134758-1

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	0.337		0.108	0.112	1.00	0.0822	pCi/L	03/09/17 09:42	03/31/17 06:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					03/09/17 09:42	03/31/17 06:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.670		0.295	0.302	1.00	0.429	pCi/L	03/09/17 10:11	03/23/17 16:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		40 - 110					03/09/17 10:11	03/23/17 16:04	1
Y Carrier	90.1		40 - 110					03/09/17 10:11	03/23/17 16:04	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.01		0.314	0.322	5.00	0.429	pCi/L		03/31/17 11:27	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-2
SDG: Ash Pond

Client Sample ID: MGWA-11

Date Collected: 03/02/17 09:30

Date Received: 03/04/17 08:36

Lab Sample ID: 400-134758-2

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	0.274		0.101	0.104	1.00	0.0863	pCi/L	03/09/17 09:42	03/31/17 06:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.6		40 - 110					03/09/17 09:42	03/31/17 06:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.196	U	0.232	0.233	1.00	0.383	pCi/L	03/09/17 10:11	03/23/17 16:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.6		40 - 110					03/09/17 10:11	03/23/17 16:05	1
Y Carrier	101		40 - 110					03/09/17 10:11	03/23/17 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	0.470		0.253	0.255	5.00	0.383	pCi/L		03/31/17 11:27	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-2
 SDG: Ash Pond

Client Sample ID: MGWA-5

Lab Sample ID: 400-134758-3

Date Collected: 03/02/17 10:45

Matrix: Water

Date Received: 03/04/17 08:36

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.142		0.0757	0.0768	1.00	0.0842	pCi/L	03/09/17 09:42	03/31/17 06:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					03/09/17 09:42	03/31/17 06:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0368	U	0.216	0.216	1.00	0.396	pCi/L	03/09/17 10:11	03/23/17 16:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					03/09/17 10:11	03/23/17 16:05	1
Y Carrier	83.4		40 - 110					03/09/17 10:11	03/23/17 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	0.105	U	0.229	0.229	5.00	0.396	pCi/L		03/31/17 11:27	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-2
 SDG: Ash Pond

Client Sample ID: MGWA-6

Lab Sample ID: 400-134758-4

Date Collected: 03/02/17 10:45

Matrix: Water

Date Received: 03/04/17 08:36

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		0.119	0.123	1.00	0.126	pCi/L	03/09/17 09:42	03/31/17 06:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.2		40 - 110					03/09/17 09:42	03/31/17 06:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0921	U	0.217	0.217	1.00	0.408	pCi/L	03/09/17 10:11	03/23/17 16:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.2		40 - 110					03/09/17 10:11	03/23/17 16:05	1
Y Carrier	86.4		40 - 110					03/09/17 10:11	03/23/17 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	0.236	U	0.248	0.250	5.00	0.408	pCi/L		03/31/17 11:27	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-2
 SDG: Ash Pond

Client Sample ID: MGWC-7

Lab Sample ID: 400-134758-5

Date Collected: 03/02/17 11:02

Matrix: Water

Date Received: 03/04/17 08:36

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.841		0.171	0.187	1.00	0.0848	pCi/L	03/09/17 09:42	03/31/17 06:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.7		40 - 110					03/09/17 09:42	03/31/17 06:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.556		0.301	0.305	1.00	0.451	pCi/L	03/09/17 10:11	03/23/17 16:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.7		40 - 110					03/09/17 10:11	03/23/17 16:05	1
Y Carrier	85.6		40 - 110					03/09/17 10:11	03/23/17 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	1.40		0.346	0.358	5.00	0.451	pCi/L		03/31/17 11:27	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-2
SDG: Ash Pond

Client Sample ID: MGWC-8

Lab Sample ID: 400-134758-6

Date Collected: 03/02/17 12:05

Matrix: Water

Date Received: 03/04/17 08:36

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.768		0.174	0.187	1.00	0.134	pCi/L	03/09/17 09:42	03/31/17 06:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110					03/09/17 09:42	03/31/17 06:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.266	U	0.279	0.280	1.00	0.455	pCi/L	03/09/17 10:11	03/23/17 16:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110					03/09/17 10:11	03/23/17 16:05	1
Y Carrier	85.2		40 - 110					03/09/17 10:11	03/23/17 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	1.03		0.329	0.337	5.00	0.455	pCi/L		03/31/17 11:27	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-2
SDG: Ash Pond

Client Sample ID: MGWC-1

Lab Sample ID: 400-134758-7

Date Collected: 03/02/17 12:00

Matrix: Water

Date Received: 03/04/17 08:36

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.684		0.161	0.173	1.00	0.124	pCi/L	03/09/17 09:42	03/31/17 06:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.4		40 - 110					03/09/17 09:42	03/31/17 06:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.398	U	0.287	0.289	1.00	0.449	pCi/L	03/09/17 10:11	03/23/17 16:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.4		40 - 110					03/09/17 10:11	03/23/17 16:05	1
Y Carrier	83.4		40 - 110					03/09/17 10:11	03/23/17 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	1.08		0.329	0.337	5.00	0.449	pCi/L		03/31/17 11:27	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-2
 SDG: Ash Pond

Client Sample ID: MGWC-3

Lab Sample ID: 400-134758-8

Date Collected: 03/02/17 12:35

Matrix: Water

Date Received: 03/04/17 08:36

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.974		0.189	0.208	1.00	0.120	pCi/L	03/09/17 09:42	03/31/17 06:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.0		40 - 110					03/09/17 09:42	03/31/17 06:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.395	U	0.285	0.287	1.00	0.444	pCi/L	03/09/17 10:11	03/23/17 16:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.0		40 - 110					03/09/17 10:11	03/23/17 16:05	1
Y Carrier	83.4		40 - 110					03/09/17 10:11	03/23/17 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	1.37		0.341	0.354	5.00	0.444	pCi/L		03/31/17 11:27	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-2
SDG: Ash Pond

Client Sample ID: MGWC-2

Lab Sample ID: 400-134758-9

Date Collected: 03/02/17 13:30

Matrix: Water

Date Received: 03/04/17 08:36

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.258		0.103	0.106	1.00	0.0965	pCi/L	03/09/17 09:42	03/31/17 06:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.8		40 - 110					03/09/17 09:42	03/31/17 06:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.226	U	0.256	0.257	1.00	0.420	pCi/L	03/09/17 10:11	03/23/17 16:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.8		40 - 110					03/09/17 10:11	03/23/17 16:05	1
Y Carrier	82.6		40 - 110					03/09/17 10:11	03/23/17 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	0.484		0.276	0.278	5.00	0.420	pCi/L		03/31/17 11:27	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-2
 SDG: Ash Pond

Client Sample ID: MGWC-12

Lab Sample ID: 400-134758-10

Date Collected: 03/02/17 13:30

Matrix: Water

Date Received: 03/04/17 08:36

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0579	U	0.0667	0.0669	1.00	0.108	pCi/L	03/09/17 09:42	03/31/17 06:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110					03/09/17 09:42	03/31/17 06:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.379	U	0.265	0.267	1.00	0.409	pCi/L	03/09/17 10:11	03/23/17 16:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110					03/09/17 10:11	03/23/17 16:05	1
Y Carrier	84.1		40 - 110					03/09/17 10:11	03/23/17 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	0.437		0.273	0.276	5.00	0.409	pCi/L		03/31/17 11:27	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-2
 SDG: Ash Pond

Client Sample ID: DUP-1
Date Collected: 03/02/17 00:00
Date Received: 03/04/17 08:36

Lab Sample ID: 400-134758-11
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	0.696		0.156	0.168	1.00	0.0892	pCi/L	03/09/17 09:42	03/31/17 06:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.1		40 - 110					03/09/17 09:42	03/31/17 06:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.374	U	0.281	0.283	1.00	0.443	pCi/L	03/09/17 10:11	03/23/17 16:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.1		40 - 110					03/09/17 10:11	03/23/17 16:17	1
Y Carrier	84.1		40 - 110					03/09/17 10:11	03/23/17 16:17	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	1.07		0.322	0.330	5.00	0.443	pCi/L		03/31/17 11:27	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-2
SDG: Ash Pond

Client Sample ID: FB-1
Date Collected: 03/02/17 12:45
Date Received: 03/04/17 08:36

Lab Sample ID: 400-134758-12
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	0.0318	U	0.0599	0.0600	1.00	0.107	pCi/L	03/09/17 09:42	03/31/17 06:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					03/09/17 09:42	03/31/17 06:18	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.165	U	0.247	0.248	1.00	0.415	pCi/L	03/09/17 10:11	03/23/17 16:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					03/09/17 10:11	03/23/17 16:17	1
Y Carrier	84.5		40 - 110					03/09/17 10:11	03/23/17 16:17	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	0.197	U	0.254	0.255	5.00	0.415	pCi/L		03/31/17 11:27	1

Client Sample Results

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

TestAmerica Job ID: 400-134758-2
SDG: Ash Pond

Client Sample ID: FERB-1

Lab Sample ID: 400-134758-13

Date Collected: 03/02/17 12:55

Matrix: Water

Date Received: 03/04/17 08:36

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00504	U	0.0621	0.0621	1.00	0.122	pCi/L	03/09/17 09:42	03/31/17 06:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					03/09/17 09:42	03/31/17 06:18	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.147	U	0.242	0.243	1.00	0.453	pCi/L	03/09/17 10:11	03/23/17 16:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					03/09/17 10:11	03/23/17 16:17	1
Y Carrier	87.1		40 - 110					03/09/17 10:11	03/23/17 16:17	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	-0.142	U	0.250	0.250	5.00	0.453	pCi/L		03/31/17 11:27	1

Definitions/Glossary

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

TestAmerica Job ID: 400-134758-2
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 McIntosh

TestAmerica Job ID: 400-134758-2
SDG: Ash Pond

Client Sample ID: MGWA-10

Date Collected: 03/02/17 09:30

Date Received: 03/04/17 08:36

Lab Sample ID: 400-134758-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296786	03/09/17 09:42	BME	TAL SL
Total/NA	Analysis	9315		1	300931	03/31/17 06:15	ALD	TAL SL
Total/NA	Prep	PrecSep_0			296793	03/09/17 10:11	BME	TAL SL
Total/NA	Analysis	9320		1	299254	03/23/17 16:04	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300959	03/31/17 11:27	RTM	TAL SL

Client Sample ID: MGWA-11

Date Collected: 03/02/17 09:30

Date Received: 03/04/17 08:36

Lab Sample ID: 400-134758-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296786	03/09/17 09:42	BME	TAL SL
Total/NA	Analysis	9315		1	300931	03/31/17 06:15	ALD	TAL SL
Total/NA	Prep	PrecSep_0			296793	03/09/17 10:11	BME	TAL SL
Total/NA	Analysis	9320		1	299254	03/23/17 16:05	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300959	03/31/17 11:27	RTM	TAL SL

Client Sample ID: MGWA-5

Date Collected: 03/02/17 10:45

Date Received: 03/04/17 08:36

Lab Sample ID: 400-134758-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296786	03/09/17 09:42	BME	TAL SL
Total/NA	Analysis	9315		1	300931	03/31/17 06:15	ALD	TAL SL
Total/NA	Prep	PrecSep_0			296793	03/09/17 10:11	BME	TAL SL
Total/NA	Analysis	9320		1	299254	03/23/17 16:05	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300959	03/31/17 11:27	RTM	TAL SL

Client Sample ID: MGWA-6

Date Collected: 03/02/17 10:45

Date Received: 03/04/17 08:36

Lab Sample ID: 400-134758-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296786	03/09/17 09:42	BME	TAL SL
Total/NA	Analysis	9315		1	300931	03/31/17 06:15	ALD	TAL SL
Total/NA	Prep	PrecSep_0			296793	03/09/17 10:11	BME	TAL SL
Total/NA	Analysis	9320		1	299254	03/23/17 16:05	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300959	03/31/17 11:27	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-134758-2
SDG: Ash Pond

Client Sample ID: MGWC-7

Lab Sample ID: 400-134758-5

Date Collected: 03/02/17 11:02

Matrix: Water

Date Received: 03/04/17 08:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296786	03/09/17 09:42	BME	TAL SL
Total/NA	Analysis	9315		1	300931	03/31/17 06:15	ALD	TAL SL
Total/NA	Prep	PrecSep_0			296793	03/09/17 10:11	BME	TAL SL
Total/NA	Analysis	9320		1	299254	03/23/17 16:05	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300959	03/31/17 11:27	RTM	TAL SL

Client Sample ID: MGWC-8

Lab Sample ID: 400-134758-6

Date Collected: 03/02/17 12:05

Matrix: Water

Date Received: 03/04/17 08:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296786	03/09/17 09:42	BME	TAL SL
Total/NA	Analysis	9315		1	300931	03/31/17 06:15	ALD	TAL SL
Total/NA	Prep	PrecSep_0			296793	03/09/17 10:11	BME	TAL SL
Total/NA	Analysis	9320		1	299254	03/23/17 16:05	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300959	03/31/17 11:27	RTM	TAL SL

Client Sample ID: MGWC-1

Lab Sample ID: 400-134758-7

Date Collected: 03/02/17 12:00

Matrix: Water

Date Received: 03/04/17 08:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296786	03/09/17 09:42	BME	TAL SL
Total/NA	Analysis	9315		1	300931	03/31/17 06:15	ALD	TAL SL
Total/NA	Prep	PrecSep_0			296793	03/09/17 10:11	BME	TAL SL
Total/NA	Analysis	9320		1	299254	03/23/17 16:05	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300959	03/31/17 11:27	RTM	TAL SL

Client Sample ID: MGWC-3

Lab Sample ID: 400-134758-8

Date Collected: 03/02/17 12:35

Matrix: Water

Date Received: 03/04/17 08:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296786	03/09/17 09:42	BME	TAL SL
Total/NA	Analysis	9315		1	300931	03/31/17 06:16	ALD	TAL SL
Total/NA	Prep	PrecSep_0			296793	03/09/17 10:11	BME	TAL SL
Total/NA	Analysis	9320		1	299254	03/23/17 16:05	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300959	03/31/17 11:27	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-134758-2
SDG: Ash Pond

Client Sample ID: MGWC-2

Lab Sample ID: 400-134758-9

Date Collected: 03/02/17 13:30

Matrix: Water

Date Received: 03/04/17 08:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296786	03/09/17 09:42	BME	TAL SL
Total/NA	Analysis	9315		1	300931	03/31/17 06:16	ALD	TAL SL
Total/NA	Prep	PrecSep_0			296793	03/09/17 10:11	BME	TAL SL
Total/NA	Analysis	9320		1	299254	03/23/17 16:05	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300959	03/31/17 11:27	RTM	TAL SL

Client Sample ID: MGWC-12

Lab Sample ID: 400-134758-10

Date Collected: 03/02/17 13:30

Matrix: Water

Date Received: 03/04/17 08:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296786	03/09/17 09:42	BME	TAL SL
Total/NA	Analysis	9315		1	300931	03/31/17 06:16	ALD	TAL SL
Total/NA	Prep	PrecSep_0			296793	03/09/17 10:11	BME	TAL SL
Total/NA	Analysis	9320		1	299254	03/23/17 16:05	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300959	03/31/17 11:27	RTM	TAL SL

Client Sample ID: DUP-1

Lab Sample ID: 400-134758-11

Date Collected: 03/02/17 00:00

Matrix: Water

Date Received: 03/04/17 08:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296786	03/09/17 09:42	BME	TAL SL
Total/NA	Analysis	9315		1	300931	03/31/17 06:16	ALD	TAL SL
Total/NA	Prep	PrecSep_0			296793	03/09/17 10:11	BME	TAL SL
Total/NA	Analysis	9320		1	299257	03/23/17 16:17	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300959	03/31/17 11:27	RTM	TAL SL

Client Sample ID: FB-1

Lab Sample ID: 400-134758-12

Date Collected: 03/02/17 12:45

Matrix: Water

Date Received: 03/04/17 08:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296786	03/09/17 09:42	BME	TAL SL
Total/NA	Analysis	9315		1	300932	03/31/17 06:18	ALD	TAL SL
Total/NA	Prep	PrecSep_0			296793	03/09/17 10:11	BME	TAL SL
Total/NA	Analysis	9320		1	299257	03/23/17 16:17	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300959	03/31/17 11:27	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-134758-2
SDG: Ash Pond

Client Sample ID: FERB-1

Lab Sample ID: 400-134758-13

Date Collected: 03/02/17 12:55

Matrix: Water

Date Received: 03/04/17 08:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			296786	03/09/17 09:42	BME	TAL SL
Total/NA	Analysis	9315		1	300932	03/31/17 06:18	ALD	TAL SL
Total/NA	Prep	PrecSep_0			296793	03/09/17 10:11	BME	TAL SL
Total/NA	Analysis	9320		1	299257	03/23/17 16:17	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	300959	03/31/17 11:27	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 McIntosh

TestAmerica Job ID: 400-134758-2
 SDG: Ash Pond

Rad

Prep Batch: 296786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134758-1	MGWA-10	Total/NA	Water	PrecSep-21	
400-134758-2	MGWA-11	Total/NA	Water	PrecSep-21	
400-134758-3	MGWA-5	Total/NA	Water	PrecSep-21	
400-134758-4	MGWA-6	Total/NA	Water	PrecSep-21	
400-134758-5	MGWC-7	Total/NA	Water	PrecSep-21	
400-134758-6	MGWC-8	Total/NA	Water	PrecSep-21	
400-134758-7	MGWC-1	Total/NA	Water	PrecSep-21	
400-134758-8	MGWC-3	Total/NA	Water	PrecSep-21	
400-134758-9	MGWC-2	Total/NA	Water	PrecSep-21	
400-134758-10	MGWC-12	Total/NA	Water	PrecSep-21	
400-134758-11	DUP-1	Total/NA	Water	PrecSep-21	
400-134758-12	FB-1	Total/NA	Water	PrecSep-21	
400-134758-13	FERB-1	Total/NA	Water	PrecSep-21	
MB 160-296786/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-296786/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-134758-7 DU	MGWC-1	Total/NA	Water	PrecSep-21	

Prep Batch: 296793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-134758-1	MGWA-10	Total/NA	Water	PrecSep_0	
400-134758-2	MGWA-11	Total/NA	Water	PrecSep_0	
400-134758-3	MGWA-5	Total/NA	Water	PrecSep_0	
400-134758-4	MGWA-6	Total/NA	Water	PrecSep_0	
400-134758-5	MGWC-7	Total/NA	Water	PrecSep_0	
400-134758-6	MGWC-8	Total/NA	Water	PrecSep_0	
400-134758-7	MGWC-1	Total/NA	Water	PrecSep_0	
400-134758-8	MGWC-3	Total/NA	Water	PrecSep_0	
400-134758-9	MGWC-2	Total/NA	Water	PrecSep_0	
400-134758-10	MGWC-12	Total/NA	Water	PrecSep_0	
400-134758-11	DUP-1	Total/NA	Water	PrecSep_0	
400-134758-12	FB-1	Total/NA	Water	PrecSep_0	
400-134758-13	FERB-1	Total/NA	Water	PrecSep_0	
MB 160-296793/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-296793/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-134758-7 DU	MGWC-1	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-134758-2
SDG: Ash Pond

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-296786/1-A
Matrix: Water
Analysis Batch: 300931

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 296786

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.05135	U	0.0597	0.0599	1.00	0.0964	pCi/L	03/09/17 09:42	03/31/17 06:13	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.2		40 - 110					03/09/17 09:42	03/31/17 06:13	1

Lab Sample ID: LCS 160-296786/2-A
Matrix: Water
Analysis Batch: 300931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 296786

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	11.43		1.20	1.00	0.124	pCi/L	101	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	85.0		40 - 110						

Lab Sample ID: 400-134758-7 DU
Matrix: Water
Analysis Batch: 300931

Client Sample ID: MGWC-1
Prep Type: Total/NA
Prep Batch: 296786

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.684		1.084		0.224	1.00	0.116	pCi/L	1.01	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	78.8		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-296793/1-A
Matrix: Water
Analysis Batch: 299254

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 296793

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.06905	U	0.227	0.228	1.00	0.398	pCi/L	03/09/17 10:11	03/23/17 16:03	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.2		40 - 110					03/09/17 10:11	03/23/17 16:03	1
Y Carrier	83.4		40 - 110					03/09/17 10:11	03/23/17 16:03	1

QC Sample Results

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

TestAmerica Job ID: 400-134758-2
 SDG: Ash Pond

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

Lab Sample ID: LCS 160-296793/2-A
Matrix: Water
Analysis Batch: 299254

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 296793

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.7	14.30		1.58	1.00	0.428	pCi/L	105	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	85.0		40 - 110
Y Carrier	85.2		40 - 110

Lab Sample ID: 400-134758-7 DU
Matrix: Water
Analysis Batch: 299254

Client Sample ID: MGWC-1
Prep Type: Total/NA
Prep Batch: 296793

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.398	U	0.4118	U	0.305	1.00	0.474	pCi/L	0.02	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	78.8		40 - 110
Y Carrier	85.6		40 - 110

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

Lab Sample ID: 400-134758-7 DU
Matrix: Water
Analysis Batch: 300959

Client Sample ID: MGWC-1
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	1.08		1.496		0.378	5.00	0.474	pCi/L	0.58	


Chain of Custody Record

Client Information
 Company: Southern Company
 Address: 241 Ralph McGill Blvd SE B10185
 City: Atlanta
 State, Zip: GA, 30308
 Phone: 404-506-7239
 Email: JIMPELTY@southernco.com
 Project Name: Plant McIntosh - Ash Pond
 Site: COR

Sampler: M. Burch M. B. M. Thomas M. T. Payne J.P.
 W. Vigo W.F.V.
 Lab PM: Whitney, Cheyenne R.
 E-Mail: cheyenne.whitire@testamericainc.com

Carrier Tracking No(s):
 Job #: 1 of 2

Due Date Requested:
 TAT Requested (days):
 PO #:
 WO #:
 Project #:
 SSON#:

Analysis Requested
 400-134758 COC

 Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470
 Radium 226 & 228 - SW-846 9315 & 9320
 TDS - SM 2540C ; Cl₂, SO₄ - EPA 300
 Performance (MS/SP) (Yes or No)
 Field Filtered Sample (Yes or No)
 Total Number of Containers

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=Soil, G=Grab)	Preservation Code	Special Instructions/Note
M G W A - 10	3/2/17	0930	G	W	111	
M G W A - 11	3/2/17	0930	G	W	111	
M G W A - 5	3/2/17	1045	G	W	111	
M G W A - 6	3/2/17	1045	G	W	111	
M G W C - 7	3/2/17	1102	G	W	111	
M G W C - 8	3/2/17	1205	G	W	111	
M G W C - 1	3/2/17	1200	G	W	112	2nd Reading Not Collected (Lots of Pb)
M G W C - 3	3/2/17	1255	G	W	111	
M G W C - 2	3/2/17	1330	G	W	111	
M G W C - 12	3/2/17	1330	G	W	111	
DUP - 1	3/2/17	---	G	W	111	

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: *Will King (ERM)* Date: 3/3/17 1200 Company: _____
 Relinquished by: *[Signature]* Date: 3-3-17 1201 Company: 17A
 Relinquished by: *[Signature]* Date: _____ Company: _____
 Custody Seal No.: _____
 Δ Yes Δ No
 Cooler Temperature(s) and Other Remarks: *2.2°C IR 2*

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)



Chain of Custody Record

Client Information Company: Southern Company Address: 241 Ralph McGill Blvd SE B10185 City: Atlanta State, Zip: GA, 30308 Phone: 404-506-7239 Email: LMPEITY@southernco.com Project Name: Plant McIntosh - Ash Pond Site: CCR		Sampler: M. Burch M. B. M. Thomas M. T. T. Payne J.P. Lab PM: Whitmire, Cheyenne R. E-Mail: cheyenne.whitmire@testamericainc.com		Carrier Tracking No(s): Page: 2 of 2 Job #:	
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 - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetane V - MCAA W - pH 4-5 Z - other (specify)			
Sample Identification Sample ID: FB-1 Sample ID: FEBB-1		Sample Date: 3/2/17 Sample Time: 1245 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=soil, L=liquid, T=tissue, A=air): W		Total Number of Containers: 2 Special Instructions/Note:	
Possible Hazard Identification <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		Sample Disposal (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 <input type="checkbox"/> Archive For _____ Months			
Chain of Custody Relinquished by: <i>Willie (ERS)</i> Relinquished by: <i>Willie (ERS)</i> Relinquished by:		Date/Time: 3/3-17 1200 Date/Time: 3/3-17 1201 Date/Time:		Received by: <i>Willie (ERS)</i> Received by: <i>Willie (ERS)</i> Received by:	
Custody Seal No.: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks:			



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-134758-2

SDG Number: Ash Pond

Login Number: 134758

List Number: 1

Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.4°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	

Certification Summary

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

TestAmerica Job ID: 400-134758-2
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 McIntosh

TestAmerica Job ID: 400-134758-2
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: 400-140650-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR - Plant McIntosh

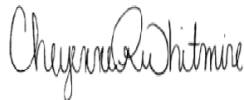
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

8/10/2017 4:13:11 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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

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

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Case Narrative

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

TestAmerica Job ID: 400-140650-1
SDG: Ash Pond

Job ID: 400-140650-1

Laboratory: TestAmerica Pensacola

Narrative

**Job Narrative
400-140650-1**

Metals

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 361436 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 McIntosh

TestAmerica Job ID: 400-140650-1
SDG: Ash Pond

Client Sample ID: MGWA-11

Lab Sample ID: 400-140650-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.2		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	1.4		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	0.087		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	30		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.011		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	150		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-12

Lab Sample ID: 400-140650-2

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	4.8		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	0.043		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	26		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.014		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	150		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-1

Lab Sample ID: 400-140650-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.2		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	1.4		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	0.086		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	30		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.012		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	160		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-1

Lab Sample ID: 400-140650-4

No Detections.

Client Sample ID: FERB-1

Lab Sample ID: 400-140650-5

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

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

TestAmerica Job ID: 400-140650-1
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 McIntosh

TestAmerica Job ID: 400-140650-1
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-140650-1	MGWA-11	Water	07/13/17 13:40	07/13/17 17:30
400-140650-2	MGWC-12	Water	07/13/17 15:18	07/13/17 17:30
400-140650-3	DUP-1	Water	07/13/17 00:00	07/13/17 17:30
400-140650-4	FB-1	Water	07/13/17 15:00	07/13/17 17:30
400-140650-5	FERB-1	Water	07/13/17 15:50	07/13/17 17:30

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

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

TestAmerica Job ID: 400-140650-1
 SDG: Ash Pond

Client Sample ID: MGWA-11
Date Collected: 07/13/17 13:40
Date Received: 07/13/17 17:30

Lab Sample ID: 400-140650-1
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.2		1.0	0.89	mg/L			07/20/17 15:20	1
Fluoride	0.12	J	0.20	0.082	mg/L			07/20/17 15:20	1
Sulfate	1.4		1.0	0.70	mg/L			07/20/17 15:20	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		07/24/17 07:30	07/28/17 10:51	5
Arsenic	0.00066	J	0.0013	0.00046	mg/L		07/24/17 07:30	07/28/17 10:51	5
Barium	0.087		0.0025	0.00049	mg/L		07/24/17 07:30	07/28/17 10:51	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/28/17 10:51	5
Boron	<0.021		0.050	0.021	mg/L		07/24/17 07:30	07/27/17 00:14	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/28/17 10:51	5
Calcium	30		0.25	0.13	mg/L		07/24/17 07:30	07/28/17 10:51	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/24/17 07:30	07/28/17 10:51	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/24/17 07:30	07/27/17 00:14	5
Lead	<0.00035	^ *	0.0013	0.00035	mg/L		07/24/17 07:30	07/28/17 10:51	5
Lithium	0.011		0.0050	0.0032	mg/L		07/24/17 07:30	07/28/17 10:51	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/24/17 07:30	07/28/17 10:51	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/24/17 07:30	07/28/17 10:51	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/24/17 07:30	07/28/17 10:51	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		07/21/17 10:43	07/24/17 12:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	150		5.0	3.4	mg/L			07/20/17 15:24	1

Client Sample Results

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

TestAmerica Job ID: 400-140650-1
SDG: Ash Pond

Client Sample ID: MGWC-12

Date Collected: 07/13/17 15:18

Date Received: 07/13/17 17:30

Lab Sample ID: 400-140650-2

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			07/20/17 16:31	1
Fluoride	0.21		0.20	0.082	mg/L			07/20/17 16:31	1
Sulfate	4.8		1.0	0.70	mg/L			07/20/17 16:31	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		07/24/17 07:30	07/28/17 10:55	5
Arsenic	0.00047	J	0.0013	0.00046	mg/L		07/24/17 07:30	07/28/17 10:55	5
Barium	0.043		0.0025	0.00049	mg/L		07/24/17 07:30	07/28/17 10:55	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/28/17 10:55	5
Boron	<0.021		0.050	0.021	mg/L		07/24/17 07:30	07/27/17 00:18	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/28/17 10:55	5
Calcium	26		0.25	0.13	mg/L		07/24/17 07:30	07/28/17 10:55	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/24/17 07:30	07/28/17 10:55	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/24/17 07:30	07/27/17 00:18	5
Lead	<0.00035	^ *	0.0013	0.00035	mg/L		07/24/17 07:30	07/28/17 10:55	5
Lithium	0.014		0.0050	0.0032	mg/L		07/24/17 07:30	07/28/17 10:55	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/24/17 07:30	07/28/17 10:55	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/24/17 07:30	07/28/17 10:55	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/24/17 07:30	07/28/17 10:55	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		07/21/17 10:43	07/24/17 12:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	150		5.0	3.4	mg/L			07/20/17 15:24	1

Client Sample Results

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

TestAmerica Job ID: 400-140650-1
SDG: Ash Pond

Client Sample ID: DUP-1
Date Collected: 07/13/17 00:00
Date Received: 07/13/17 17:30

Lab Sample ID: 400-140650-3
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.2		1.0	0.89	mg/L			07/20/17 16:53	1
Fluoride	0.14	J	0.20	0.082	mg/L			07/20/17 16:53	1
Sulfate	1.4		1.0	0.70	mg/L			07/20/17 16:53	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		07/24/17 07:30	07/28/17 11:00	5
Arsenic	0.00053	J	0.0013	0.00046	mg/L		07/24/17 07:30	07/28/17 11:00	5
Barium	0.086		0.0025	0.00049	mg/L		07/24/17 07:30	07/28/17 11:00	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/28/17 11:00	5
Boron	<0.021		0.050	0.021	mg/L		07/24/17 07:30	07/27/17 00:23	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/28/17 11:00	5
Calcium	30		0.25	0.13	mg/L		07/24/17 07:30	07/28/17 11:00	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/24/17 07:30	07/28/17 11:00	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/24/17 07:30	07/27/17 00:23	5
Lead	<0.00035	^ *	0.0013	0.00035	mg/L		07/24/17 07:30	07/28/17 11:00	5
Lithium	0.012		0.0050	0.0032	mg/L		07/24/17 07:30	07/28/17 11:00	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/24/17 07:30	07/28/17 11:00	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/24/17 07:30	07/28/17 11:00	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/24/17 07:30	07/28/17 11:00	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		07/21/17 10:43	07/24/17 12:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	160		5.0	3.4	mg/L			07/20/17 15:24	1

Client Sample Results

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

TestAmerica Job ID: 400-140650-1
SDG: Ash Pond

Client Sample ID: FB-1
Date Collected: 07/13/17 15:00
Date Received: 07/13/17 17:30

Lab Sample ID: 400-140650-4
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			07/20/17 17:16	1
Fluoride	<0.082		0.20	0.082	mg/L			07/20/17 17:16	1
Sulfate	<0.70		1.0	0.70	mg/L			07/20/17 17:16	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		07/24/17 07:30	07/28/17 11:05	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/24/17 07:30	07/28/17 11:05	5
Barium	<0.00049		0.0025	0.00049	mg/L		07/24/17 07:30	07/28/17 11:05	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/28/17 11:05	5
Boron	<0.021		0.050	0.021	mg/L		07/24/17 07:30	07/27/17 00:28	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/28/17 11:05	5
Calcium	<0.13		0.25	0.13	mg/L		07/24/17 07:30	07/28/17 11:05	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/24/17 07:30	07/28/17 11:05	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/24/17 07:30	07/27/17 00:28	5
Lead	<0.00035	^ *	0.0013	0.00035	mg/L		07/24/17 07:30	07/28/17 11:05	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/24/17 07:30	07/28/17 11:05	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/24/17 07:30	07/28/17 11:05	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/24/17 07:30	07/28/17 11:05	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/24/17 07:30	07/28/17 11:05	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		07/21/17 10:43	07/24/17 12:46	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			07/20/17 15:24	1

Client Sample Results

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

TestAmerica Job ID: 400-140650-1
SDG: Ash Pond

Client Sample ID: FERB-1
Date Collected: 07/13/17 15:50
Date Received: 07/13/17 17:30

Lab Sample ID: 400-140650-5
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			07/20/17 18:25	1
Fluoride	<0.082		0.20	0.082	mg/L			07/20/17 18:25	1
Sulfate	<0.70		1.0	0.70	mg/L			07/20/17 18:25	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		07/24/17 07:30	07/28/17 11:10	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/24/17 07:30	07/28/17 11:10	5
Barium	<0.00049		0.0025	0.00049	mg/L		07/24/17 07:30	07/28/17 11:10	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/28/17 11:10	5
Boron	<0.021		0.050	0.021	mg/L		07/24/17 07:30	07/27/17 00:32	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/28/17 11:10	5
Calcium	<0.13		0.25	0.13	mg/L		07/24/17 07:30	07/28/17 11:10	5
Chromium	<0.0011		0.0025	0.0011	mg/L		07/24/17 07:30	07/28/17 11:10	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/24/17 07:30	07/27/17 00:32	5
Lead	<0.00035	^ *	0.0013	0.00035	mg/L		07/24/17 07:30	07/28/17 11:10	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/24/17 07:30	07/28/17 11:10	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/24/17 07:30	07/28/17 11:10	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/24/17 07:30	07/28/17 11:10	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/24/17 07:30	07/28/17 11:10	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		07/21/17 10:43	07/24/17 12:55	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			07/20/17 15:24	1

Definitions/Glossary

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

TestAmerica Job ID: 400-140650-1
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.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
^	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 McIntosh

TestAmerica Job ID: 400-140650-1
SDG: Ash Pond

Client Sample ID: MGWA-11

Date Collected: 07/13/17 13:40

Date Received: 07/13/17 17:30

Lab Sample ID: 400-140650-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361286	07/20/17 15:20	TAJ	TAL PEN
Total Recoverable	Prep	3005A			361436	07/24/17 07:30	SEH	TAL PEN
Total Recoverable	Analysis	6020		5	362388	07/27/17 00:14	DRE	TAL PEN
Total Recoverable	Prep	3005A			361436	07/24/17 07:30	SEH	TAL PEN
Total Recoverable	Analysis	6020		5	362368	07/28/17 10:51	DRE	TAL PEN
Total/NA	Prep	7470A			361306	07/21/17 10:43	JAP	TAL PEN
Total/NA	Analysis	7470A		1	361500	07/24/17 12:48	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	361149	07/20/17 15:24	TET	TAL PEN

Client Sample ID: MGWC-12

Date Collected: 07/13/17 15:18

Date Received: 07/13/17 17:30

Lab Sample ID: 400-140650-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361286	07/20/17 16:31	TAJ	TAL PEN
Total Recoverable	Prep	3005A			361436	07/24/17 07:30	SEH	TAL PEN
Total Recoverable	Analysis	6020		5	362388	07/27/17 00:18	DRE	TAL PEN
Total Recoverable	Prep	3005A			361436	07/24/17 07:30	SEH	TAL PEN
Total Recoverable	Analysis	6020		5	362368	07/28/17 10:55	DRE	TAL PEN
Total/NA	Prep	7470A			361306	07/21/17 10:43	JAP	TAL PEN
Total/NA	Analysis	7470A		1	361500	07/24/17 12:49	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	361149	07/20/17 15:24	TET	TAL PEN

Client Sample ID: DUP-1

Date Collected: 07/13/17 00:00

Date Received: 07/13/17 17:30

Lab Sample ID: 400-140650-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361286	07/20/17 16:53	TAJ	TAL PEN
Total Recoverable	Prep	3005A			361436	07/24/17 07:30	SEH	TAL PEN
Total Recoverable	Analysis	6020		5	362388	07/27/17 00:23	DRE	TAL PEN
Total Recoverable	Prep	3005A			361436	07/24/17 07:30	SEH	TAL PEN
Total Recoverable	Analysis	6020		5	362368	07/28/17 11:00	DRE	TAL PEN
Total/NA	Prep	7470A			361306	07/21/17 10:43	JAP	TAL PEN
Total/NA	Analysis	7470A		1	361500	07/24/17 12:51	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	361149	07/20/17 15:24	TET	TAL PEN

Lab Chronicle

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

TestAmerica Job ID: 400-140650-1
SDG: Ash Pond

Client Sample ID: FB-1

Lab Sample ID: 400-140650-4

Date Collected: 07/13/17 15:00

Matrix: Water

Date Received: 07/13/17 17:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361286	07/20/17 17:16	TAJ	TAL PEN
Total Recoverable	Prep	3005A			361436	07/24/17 07:30	SEH	TAL PEN
Total Recoverable	Analysis	6020		5	362388	07/27/17 00:28	DRE	TAL PEN
Total Recoverable	Prep	3005A			361436	07/24/17 07:30	SEH	TAL PEN
Total Recoverable	Analysis	6020		5	362368	07/28/17 11:05	DRE	TAL PEN
Total/NA	Prep	7470A			361306	07/21/17 10:43	JAP	TAL PEN
Total/NA	Analysis	7470A		1	361500	07/24/17 12:46	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	361149	07/20/17 15:24	TET	TAL PEN

Client Sample ID: FERB-1

Lab Sample ID: 400-140650-5

Date Collected: 07/13/17 15:50

Matrix: Water

Date Received: 07/13/17 17:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	361286	07/20/17 18:25	TAJ	TAL PEN
Total Recoverable	Prep	3005A			361436	07/24/17 07:30	SEH	TAL PEN
Total Recoverable	Analysis	6020		5	362388	07/27/17 00:32	DRE	TAL PEN
Total Recoverable	Prep	3005A			361436	07/24/17 07:30	SEH	TAL PEN
Total Recoverable	Analysis	6020		5	362368	07/28/17 11:10	DRE	TAL PEN
Total/NA	Prep	7470A			361306	07/21/17 10:43	JAP	TAL PEN
Total/NA	Analysis	7470A		1	361500	07/24/17 12:55	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	361149	07/20/17 15:24	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 McIntosh

TestAmerica Job ID: 400-140650-1
SDG: Ash Pond

HPLC/IC

Analysis Batch: 361286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140650-1	MGWA-11	Total/NA	Water	300.0	
400-140650-2	MGWC-12	Total/NA	Water	300.0	
400-140650-3	DUP-1	Total/NA	Water	300.0	
400-140650-4	FB-1	Total/NA	Water	300.0	
400-140650-5	FERB-1	Total/NA	Water	300.0	
MB 400-361286/4	Method Blank	Total/NA	Water	300.0	
LCS 400-361286/5	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-361286/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-140650-1 MS	MGWA-11	Total/NA	Water	300.0	
400-140650-1 MSD	MGWA-11	Total/NA	Water	300.0	

Metals

Prep Batch: 361306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140650-1	MGWA-11	Total/NA	Water	7470A	
400-140650-2	MGWC-12	Total/NA	Water	7470A	
400-140650-3	DUP-1	Total/NA	Water	7470A	
400-140650-4	FB-1	Total/NA	Water	7470A	
400-140650-5	FERB-1	Total/NA	Water	7470A	
MB 400-361306/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-361306/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-140651-B-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-140651-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 361436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140650-1	MGWA-11	Total Recoverable	Water	3005A	
400-140650-2	MGWC-12	Total Recoverable	Water	3005A	
400-140650-3	DUP-1	Total Recoverable	Water	3005A	
400-140650-4	FB-1	Total Recoverable	Water	3005A	
400-140650-5	FERB-1	Total Recoverable	Water	3005A	
MB 400-361436/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-361436/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-140722-D-6-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-140722-D-6-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 361500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140650-1	MGWA-11	Total/NA	Water	7470A	361306
400-140650-2	MGWC-12	Total/NA	Water	7470A	361306
400-140650-3	DUP-1	Total/NA	Water	7470A	361306
400-140650-4	FB-1	Total/NA	Water	7470A	361306
400-140650-5	FERB-1	Total/NA	Water	7470A	361306
MB 400-361306/14-A	Method Blank	Total/NA	Water	7470A	361306
LCS 400-361306/15-A	Lab Control Sample	Total/NA	Water	7470A	361306
400-140651-B-1-B MS	Matrix Spike	Total/NA	Water	7470A	361306
400-140651-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	361306

QC Association Summary

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

TestAmerica Job ID: 400-140650-1
SDG: Ash Pond

Metals (Continued)

Analysis Batch: 362368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140650-1	MGWA-11	Total Recoverable	Water	6020	361436
400-140650-2	MGWC-12	Total Recoverable	Water	6020	361436
400-140650-3	DUP-1	Total Recoverable	Water	6020	361436
400-140650-4	FB-1	Total Recoverable	Water	6020	361436
400-140650-5	FERB-1	Total Recoverable	Water	6020	361436

Analysis Batch: 362388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140650-1	MGWA-11	Total Recoverable	Water	6020	361436
400-140650-2	MGWC-12	Total Recoverable	Water	6020	361436
400-140650-3	DUP-1	Total Recoverable	Water	6020	361436
400-140650-4	FB-1	Total Recoverable	Water	6020	361436
400-140650-5	FERB-1	Total Recoverable	Water	6020	361436
MB 400-361436/1-A ^5	Method Blank	Total Recoverable	Water	6020	361436
LCS 400-361436/2-A	Lab Control Sample	Total Recoverable	Water	6020	361436
400-140722-D-6-B MS ^5	Matrix Spike	Total Recoverable	Water	6020	361436
400-140722-D-6-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	361436

General Chemistry

Analysis Batch: 361149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140650-1	MGWA-11	Total/NA	Water	SM 2540C	
400-140650-2	MGWC-12	Total/NA	Water	SM 2540C	
400-140650-3	DUP-1	Total/NA	Water	SM 2540C	
400-140650-4	FB-1	Total/NA	Water	SM 2540C	
400-140650-5	FERB-1	Total/NA	Water	SM 2540C	
MB 400-361149/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-361149/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-140650-1 DU	MGWA-11	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-140650-1
SDG: Ash Pond

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-361286/4
Matrix: Water
Analysis Batch: 361286

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			07/20/17 12:31	1
Fluoride	<0.082		0.20	0.082	mg/L			07/20/17 12:31	1
Sulfate	<0.70		1.0	0.70	mg/L			07/20/17 12:31	1

Lab Sample ID: LCS 400-361286/5
Matrix: Water
Analysis Batch: 361286

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	9.79		mg/L		98	90 - 110
Fluoride	10.0	9.82		mg/L		98	90 - 110
Sulfate	10.0	10.0		mg/L		100	90 - 110

Lab Sample ID: LCSD 400-361286/6
Matrix: Water
Analysis Batch: 361286

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	9.77		mg/L		98	90 - 110	0	15
Fluoride	10.0	9.62		mg/L		96	90 - 110	2	15
Sulfate	10.0	9.93		mg/L		99	90 - 110	1	15

Lab Sample ID: 400-140650-1 MS
Matrix: Water
Analysis Batch: 361286

Client Sample ID: MGWA-11
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	13.4		mg/L		92	80 - 120
Fluoride	0.12	J	10.0	9.73		mg/L		96	80 - 120
Sulfate	1.4		10.0	11.8		mg/L		104	80 - 120

Lab Sample ID: 400-140650-1 MSD
Matrix: Water
Analysis Batch: 361286

Client Sample ID: MGWA-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	4.2		10.0	13.4		mg/L		92	80 - 120	0	20
Fluoride	0.12	J	10.0	9.60		mg/L		95	80 - 120	1	20
Sulfate	1.4		10.0	11.8		mg/L		105	80 - 120	1	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-361436/1-A ^5
Matrix: Water
Analysis Batch: 362388

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 361436

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		07/24/17 07:30	07/26/17 22:55	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		07/24/17 07:30	07/26/17 22:55	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-140650-1
SDG: Ash Pond

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

Lab Sample ID: MB 400-361436/1-A ^5
Matrix: Water
Analysis Batch: 362388

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 361436

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		07/24/17 07:30	07/26/17 22:55	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/26/17 22:55	5
Boron	<0.021		0.050	0.021	mg/L		07/24/17 07:30	07/26/17 22:55	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		07/24/17 07:30	07/26/17 22:55	5
Calcium	<0.13		0.25	0.13	mg/L		07/24/17 07:30	07/26/17 22:55	5
Chromium	<0.0011	^	0.0025	0.0011	mg/L		07/24/17 07:30	07/26/17 22:55	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		07/24/17 07:30	07/26/17 22:55	5
Lead	<0.00035	^	0.0013	0.00035	mg/L		07/24/17 07:30	07/26/17 22:55	5
Lithium	<0.0032		0.0050	0.0032	mg/L		07/24/17 07:30	07/26/17 22:55	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		07/24/17 07:30	07/26/17 22:55	5
Selenium	<0.00024		0.0013	0.00024	mg/L		07/24/17 07:30	07/26/17 22:55	5
Thallium	<0.000085		0.00050	0.000085	mg/L		07/24/17 07:30	07/26/17 22:55	5

Lab Sample ID: LCS 400-361436/2-A
Matrix: Water
Analysis Batch: 362388

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 361436

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0505		mg/L		101	80 - 120
Arsenic	0.0500	0.0516		mg/L		103	80 - 120
Barium	0.0500	0.0509		mg/L		102	80 - 120
Beryllium	0.0500	0.0479		mg/L		96	80 - 120
Boron	0.100	0.0974		mg/L		97	80 - 120
Cadmium	0.0500	0.0515		mg/L		103	80 - 120
Calcium	5.00	4.93		mg/L		99	80 - 120
Cobalt	0.0500	0.0538		mg/L		108	80 - 120
Lithium	0.0500	0.0533		mg/L		107	80 - 120
Molybdenum	0.100	0.102		mg/L		102	80 - 120
Selenium	0.0500	0.0501		mg/L		100	80 - 120
Thallium	0.0100	0.00983		mg/L		98	80 - 120

Lab Sample ID: 400-140722-D-6-B MS ^5
Matrix: Water
Analysis Batch: 362388

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 361436

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0516		mg/L		103	75 - 125
Arsenic	0.089		0.0500	0.137		mg/L		96	75 - 125
Barium	0.084		0.0500	0.132		mg/L		96	75 - 125
Beryllium	<0.00034		0.0500	0.0487		mg/L		97	75 - 125
Boron	<0.021		0.100	0.116		mg/L		116	75 - 125
Cadmium	<0.00034		0.0500	0.0513		mg/L		103	75 - 125
Calcium	2.5		5.00	7.40		mg/L		98	75 - 125
Chromium	<0.0011	^	0.0500	0.0548	^	mg/L		110	75 - 125
Cobalt	0.0084		0.0500	0.0527		mg/L		88	75 - 125
Lead	<0.00035	^	0.0500	0.0486	^	mg/L		97	75 - 125
Lithium	<0.0032		0.0500	0.0487		mg/L		97	75 - 125
Molybdenum	<0.00085		0.100	0.101		mg/L		101	75 - 125
Selenium	<0.00024		0.0500	0.0492		mg/L		98	75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-140650-1
SDG: Ash Pond

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

Lab Sample ID: 400-140722-D-6-B MS ^5
Matrix: Water
Analysis Batch: 362388

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 361436

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Thallium	<0.000085		0.0100	0.00984		mg/L		98	75 - 125

Lab Sample ID: 400-140722-D-6-C MSD ^5
Matrix: Water
Analysis Batch: 362388

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 361436

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	1	20
Arsenic	0.089		0.0500	0.139		mg/L		102	75 - 125	2	20
Barium	0.084		0.0500	0.132		mg/L		96	75 - 125	0	20
Beryllium	<0.00034		0.0500	0.0477		mg/L		95	75 - 125	2	20
Boron	<0.021		0.100	0.112		mg/L		112	75 - 125	3	20
Cadmium	<0.00034		0.0500	0.0528		mg/L		106	75 - 125	3	20
Calcium	2.5		5.00	7.49		mg/L		100	75 - 125	1	20
Chromium	<0.0011	^	0.0500	0.0588	^	mg/L		118	75 - 125	7	20
Cobalt	0.0084		0.0500	0.0533		mg/L		90	75 - 125	1	20
Lead	<0.00035	^	0.0500	0.0491	^	mg/L		98	75 - 125	1	20
Lithium	<0.0032		0.0500	0.0473		mg/L		95	75 - 125	3	20
Molybdenum	<0.00085		0.100	0.102		mg/L		102	75 - 125	1	20
Selenium	<0.00024		0.0500	0.0507		mg/L		101	75 - 125	3	20
Thallium	<0.00085		0.0100	0.00986		mg/L		99	75 - 125	0	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-361306/14-A
Matrix: Water
Analysis Batch: 361500

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 361306

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		07/21/17 10:41	07/24/17 12:18	1

Lab Sample ID: LCS 400-361306/15-A
Matrix: Water
Analysis Batch: 361500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 361306

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00101	0.00106		mg/L		105	80 - 120

Lab Sample ID: 400-140651-B-1-B MS
Matrix: Water
Analysis Batch: 361500

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 361306

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000070		0.00201	0.00215		mg/L		107	80 - 120

QC Sample Results

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

TestAmerica Job ID: 400-140650-1
SDG: Ash Pond

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 400-140651-B-1-C MSD
Matrix: Water
Analysis Batch: 361500

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 361306

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070		0.00201	0.00209		mg/L		104	80 - 120	3	20

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

Lab Sample ID: MB 400-361149/1
Matrix: Water
Analysis Batch: 361149

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			07/20/17 15:24	1

Lab Sample ID: LCS 400-361149/2
Matrix: Water
Analysis Batch: 361149

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: 400-140650-1 DU
Matrix: Water
Analysis Batch: 361149

Client Sample ID: MGWA-11
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	150		150		mg/L		0	5

TestAmer Pensacola
 3355 McLemo Ave
 Pensacola, FL 32514
 Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Company: Southern Company
 Address: 42 Inverness Center Parkway
 City: Birmingham
 State, Zip: AL, 35242
 Phone: 205-992-5417
 Email: LMP.ETTY@southernco.com
 Project Name: Plant McIntosh - Ash Pond
 Site: CCR

Client Information
 Client Contact: Lauren Petty
 Lab PM: Whitmire, Cheyenne R
 Carrier Tracking No(s):
 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=oil, BT=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:
					Performs MS/MSD (Yes or No)	TDS - SM 2540C : Cl, F, SO4 - EPA 300	Field Filtered Sample (Yes or No)	Metals - (Part 257 Appendix III & IV) EPA 6020 & EPA 7470	Field Filtered Sample (Yes or No)	TDS - SM 2540C : Cl, F, SO4 - EPA 300		
MGWA-11	7/13/17	1340	G	W	X	X					3	
MGWC-12	7/13/17	1518	G	W	X	X					3	
DUP-1	7/13/17	---	G	W	X	X					3	
FB-1	7/13/17	1500	G	W	X	X					3	
FERB-1	7/13/17	1550	G	W	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: *Tabby Kelly* Date: 07-13-2017/1730 Company: _____
 Relinquished by: *Ken Bitt* Date: 7/13/17 0849 Company: _____
 Relinquished by: _____ Date: _____ Company: _____

Custody Seals Intact: Yes No
 Custody Seal No.: 1.0C ER7
 Color Temperature: 3.9C LRY NA
 Other Remarks: 1.31.16°C 2.0/2.3°C



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-140650-1

SDG Number: Ash Pond

Login Number: 140650

List Number: 1

Creator: Hughes, Nicholas T

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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	1.6°C, 2.3°C
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 McIntosh

TestAmerica Job ID: 400-140650-1
 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: 400-144562-1

TestAmerica Sample Delivery Group: Plant McIntosh Ash Pond

Client Project/Site: CCR - Plant McIntosh

Sampling Event: Ash Pond

For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

10/29/2017 4:43:42 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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www.testamericainc.com

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

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

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

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Case Narrative

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

TestAmerica Job ID: 400-144562-1
SDG: Plant McIntosh Ash Pond

Job ID: 400-144562-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-144562-1

HPLC/IC

Method(s) 300.0: The following samples were diluted due to high conductivity: MGWC-7 (400-144562-2), MGWC-8 (400-144562-6), MGWC-3 (400-144562-7) and MGWC-2 (400-144562-8). 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: MGWC-1 (400-144562-9) and DUP-1 (400-144562-11). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with analytical batch 373263 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of Sulfate in the MS/MSD was above the instrument calibration range. The data have been reported and qualified.

Metals

Method(s) 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: MGWC-8 (400-144562-6), MGWC-2 (400-144562-8) and DUP-1 (400-144562-11). Elevated reporting limits (RLs) are provided.

Detection Summary

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

TestAmerica Job ID: 400-144562-1
SDG: Plant McIntosh Ash Pond

Client Sample ID: MGWA-5

Lab Sample ID: 400-144562-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.3		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	4.9		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	31		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	190		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-7

Lab Sample ID: 400-144562-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12		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	180		5.0	3.5	mg/L	5		300.0	Total/NA
Boron	1.4		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	56		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	340		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWA-10

Lab Sample ID: 400-144562-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.9		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
Boron	0.021	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	4.8		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	78		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWA-6

Lab Sample ID: 400-144562-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.3		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	11		1.0	0.70	mg/L	1		300.0	Total/NA
Boron	0.12		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	110		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	310		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWA-11

Lab Sample ID: 400-144562-5

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	0.086	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	0.87	J	1.0	0.70	mg/L	1		300.0	Total/NA
Boron	0.025	J	0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	39		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	210		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 McIntosh

TestAmerica Job ID: 400-144562-1
SDG: Plant McIntosh Ash Pond

Client Sample ID: MGWC-8

Lab Sample ID: 400-144562-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	260		10	7.0	mg/L	10		300.0	Total/NA
Calcium	74		0.25	0.13	mg/L	5		6020	Total Recoverable
Boron - DL	4.2		0.25	0.11	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	450		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-3

Lab Sample ID: 400-144562-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	110		5.0	3.5	mg/L	5		300.0	Total/NA
Boron	1.7		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	110		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	400		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-2

Lab Sample ID: 400-144562-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	16		5.0	4.5	mg/L	5		300.0	Total/NA
Sulfate	240		5.0	3.5	mg/L	5		300.0	Total/NA
Boron - DL	3.4		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	130		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	600		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-1

Lab Sample ID: 400-144562-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14		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	170		5.0	3.5	mg/L	5		300.0	Total/NA
Boron	1.9		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	120		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	480		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-12

Lab Sample ID: 400-144562-10

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	0.22		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	4.9		1.0	0.70	mg/L	1		300.0	Total/NA
Calcium	28		0.25	0.13	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	160		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 McIntosh

TestAmerica Job ID: 400-144562-1
SDG: Plant McIntosh Ash Pond

Client Sample ID: DUP-1

Lab Sample ID: 400-144562-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.082	J	0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	230		10	7.0	mg/L	10		300.0	Total/NA
Calcium	73		0.25	0.13	mg/L	5		6020	Total Recoverable
Boron - DL	3.8		0.25	0.11	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	460		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-1

Lab Sample ID: 400-144562-12

No Detections.

Client Sample ID: FERB-1

Lab Sample ID: 400-144562-13

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Method Summary

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

TestAmerica Job ID: 400-144562-1
SDG: Plant McIntosh 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 McIntosh

TestAmerica Job ID: 400-144562-1
SDG: Plant McIntosh Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-144562-1	MGWA-5	Water	10/10/17 09:37	10/13/17 08:31
400-144562-2	MGWC-7	Water	10/10/17 10:00	10/13/17 08:31
400-144562-3	MGWA-10	Water	10/10/17 10:15	10/13/17 08:31
400-144562-4	MGWA-6	Water	10/10/17 10:51	10/13/17 08:31
400-144562-5	MGWA-11	Water	10/10/17 11:35	10/13/17 08:31
400-144562-6	MGWC-8	Water	10/10/17 11:15	10/13/17 08:31
400-144562-7	MGWC-3	Water	10/10/17 12:07	10/13/17 08:31
400-144562-8	MGWC-2	Water	10/10/17 13:00	10/13/17 08:31
400-144562-9	MGWC-1	Water	10/10/17 14:20	10/13/17 08:31
400-144562-10	MGWC-12	Water	10/10/17 13:26	10/13/17 08:31
400-144562-11	DUP-1	Water	10/10/17 00:00	10/13/17 08:31
400-144562-12	FB-1	Water	10/10/17 12:39	10/13/17 08:31
400-144562-13	FERB-1	Water	10/10/17 14:55	10/13/17 08:31

Client Sample Results

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

TestAmerica Job ID: 400-144562-1
 SDG: Plant McIntosh Ash Pond

Client Sample ID: MGWA-5
Date Collected: 10/10/17 09:37
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144562-1
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.3		1.0	0.89	mg/L			10/24/17 18:52	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 18:52	1
Sulfate	4.9		1.0	0.70	mg/L			10/24/17 18:52	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		10/15/17 13:42	10/19/17 19:07	5
Calcium	31		0.25	0.13	mg/L		10/15/17 13:42	10/19/17 19:07	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	190		5.0	3.4	mg/L			10/16/17 16:20	1



Client Sample Results

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

TestAmerica Job ID: 400-144562-1
 SDG: Plant McIntosh Ash Pond

Client Sample ID: MGWC-7
Date Collected: 10/10/17 10:00
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144562-2
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12		1.0	0.89	mg/L			10/24/17 20:00	1
Fluoride	0.28		0.20	0.082	mg/L			10/24/17 20:00	1
Sulfate	180		5.0	3.5	mg/L			10/25/17 16:04	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.4		0.050	0.021	mg/L		10/15/17 13:42	10/19/17 19:52	5
Calcium	56		0.25	0.13	mg/L		10/15/17 13:42	10/19/17 19:52	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	340		5.0	3.4	mg/L			10/16/17 16:20	1

- 1
- 2
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Client Sample Results

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

TestAmerica Job ID: 400-144562-1
 SDG: Plant McIntosh Ash Pond

Client Sample ID: MGWA-10
Date Collected: 10/10/17 10:15
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144562-3
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.9		1.0	0.89	mg/L			10/24/17 20:23	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 20:23	1
Sulfate	1.1		1.0	0.70	mg/L			10/24/17 20:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.021	J	0.050	0.021	mg/L		10/15/17 13:42	10/19/17 19:56	5
Calcium	4.8		0.25	0.13	mg/L		10/15/17 13:42	10/19/17 19:56	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	78		5.0	3.4	mg/L			10/16/17 16:20	1

- 1
- 2
- 3
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- 11
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- 13
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Client Sample Results

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

TestAmerica Job ID: 400-144562-1
 SDG: Plant McIntosh Ash Pond

Client Sample ID: MGWA-6

Lab Sample ID: 400-144562-4

Date Collected: 10/10/17 10:51

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	8.3		1.0	0.89	mg/L			10/24/17 20:46	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 20:46	1
Sulfate	11		1.0	0.70	mg/L			10/24/17 20:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.12		0.050	0.021	mg/L		10/15/17 13:42	10/19/17 20:01	5
Calcium	110		0.25	0.13	mg/L		10/15/17 13:42	10/19/17 20:01	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	310		5.0	3.4	mg/L			10/16/17 16:20	1

Client Sample Results

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

TestAmerica Job ID: 400-144562-1
 SDG: Plant McIntosh Ash Pond

Client Sample ID: MGWA-11

Date Collected: 10/10/17 11:35

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144562-5

Matrix: Water

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			10/24/17 21:09	1
Fluoride	0.086	J	0.20	0.082	mg/L			10/24/17 21:09	1
Sulfate	0.87	J	1.0	0.70	mg/L			10/24/17 21:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.025	J	0.050	0.021	mg/L		10/15/17 13:42	10/19/17 20:05	5
Calcium	39		0.25	0.13	mg/L		10/15/17 13:42	10/19/17 20:05	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	210		5.0	3.4	mg/L			10/16/17 16:20	1

Client Sample Results

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

TestAmerica Job ID: 400-144562-1
 SDG: Plant McIntosh Ash Pond

Client Sample ID: MGWC-8

Lab Sample ID: 400-144562-6

Date Collected: 10/10/17 11:15

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
Chloride	11		1.0	0.89	mg/L			10/24/17 21:31	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 21:31	1
Sulfate	260		10	7.0	mg/L			10/25/17 16:27	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	74		0.25	0.13	mg/L		10/15/17 13:42	10/19/17 20:10	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.2		0.25	0.11	mg/L		10/15/17 13:42	10/19/17 20:19	25

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	450		5.0	3.4	mg/L			10/16/17 16:20	1

Client Sample Results

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

TestAmerica Job ID: 400-144562-1
 SDG: Plant McIntosh Ash Pond

Client Sample ID: MGWC-3

Lab Sample ID: 400-144562-7

Date Collected: 10/10/17 12:07

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	14		1.0	0.89	mg/L			10/24/17 21:54	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 21:54	1
Sulfate	110		5.0	3.5	mg/L			10/25/17 16:50	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.7		0.050	0.021	mg/L		10/15/17 13:42	10/19/17 20:23	5
Calcium	110		0.25	0.13	mg/L		10/15/17 13:42	10/19/17 20:23	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	400		5.0	3.4	mg/L			10/16/17 16:20	1

Client Sample Results

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

TestAmerica Job ID: 400-144562-1
 SDG: Plant McIntosh Ash Pond

Client Sample ID: MGWC-2
Date Collected: 10/10/17 13:00
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144562-8
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16		5.0	4.5	mg/L			10/25/17 11:53	5
Fluoride	<0.41		1.0	0.41	mg/L			10/25/17 11:53	5
Sulfate	240		5.0	3.5	mg/L			10/25/17 11:53	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.4		0.25	0.11	mg/L		10/15/17 13:42	10/19/17 20:59	25
Calcium	130		1.3	0.63	mg/L		10/15/17 13:42	10/19/17 20:59	25

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	600		5.0	3.4	mg/L			10/16/17 16:20	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 McIntosh

TestAmerica Job ID: 400-144562-1
 SDG: Plant McIntosh Ash Pond

Client Sample ID: MGWC-1
Date Collected: 10/10/17 14:20
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144562-9
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14		1.0	0.89	mg/L			10/25/17 17:12	1
Fluoride	0.18	J	0.20	0.082	mg/L			10/25/17 17:12	1
Sulfate	170		5.0	3.5	mg/L			10/26/17 11:29	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.9		0.050	0.021	mg/L		10/15/17 13:42	10/19/17 21:04	5
Calcium	120		0.25	0.13	mg/L		10/15/17 13:42	10/19/17 21:04	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	480		5.0	3.4	mg/L			10/16/17 16:20	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 McIntosh

TestAmerica Job ID: 400-144562-1
 SDG: Plant McIntosh Ash Pond

Client Sample ID: MGWC-12

Date Collected: 10/10/17 13:26

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144562-10

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			10/25/17 17:58	1
Fluoride	0.22		0.20	0.082	mg/L			10/25/17 17:58	1
Sulfate	4.9		1.0	0.70	mg/L			10/25/17 17:58	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		10/15/17 13:42	10/19/17 21:08	5
Calcium	28		0.25	0.13	mg/L		10/15/17 13:42	10/19/17 21:08	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	160		5.0	3.4	mg/L			10/17/17 13:42	1

Client Sample Results

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

TestAmerica Job ID: 400-144562-1
 SDG: Plant McIntosh Ash Pond

Client Sample ID: DUP-1
Date Collected: 10/10/17 00:00
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144562-11
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11		1.0	0.89	mg/L			10/25/17 18:21	1
Fluoride	0.082	J	0.20	0.082	mg/L			10/25/17 18:21	1
Sulfate	230		10	7.0	mg/L			10/26/17 15:17	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	73		0.25	0.13	mg/L		10/15/17 13:42	10/19/17 21:13	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.8		0.25	0.11	mg/L		10/15/17 13:42	10/20/17 13:49	25

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	460		5.0	3.4	mg/L			10/14/17 14:50	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 McIntosh

TestAmerica Job ID: 400-144562-1
 SDG: Plant McIntosh Ash Pond

Client Sample ID: FB-1
Date Collected: 10/10/17 12:39
Date Received: 10/13/17 08:31

Lab Sample ID: 400-144562-12
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			10/25/17 18:44	1
Fluoride	<0.082		0.20	0.082	mg/L			10/25/17 18:44	1
Sulfate	<0.70		1.0	0.70	mg/L			10/25/17 18:44	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		10/15/17 13:42	10/19/17 21:17	5
Calcium	<0.13		0.25	0.13	mg/L		10/15/17 13:42	10/19/17 21:17	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			10/17/17 13:42	1



Client Sample Results

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

TestAmerica Job ID: 400-144562-1
SDG: Plant McIntosh Ash Pond

Client Sample ID: FERB-1

Date Collected: 10/10/17 14:55

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144562-13

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			10/25/17 19:52	1
Fluoride	<0.082		0.20	0.082	mg/L			10/25/17 19:52	1
Sulfate	<0.70		1.0	0.70	mg/L			10/25/17 19:52	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		10/15/17 13:42	10/19/17 21:22	5
Calcium	<0.13		0.25	0.13	mg/L		10/15/17 13:42	10/19/17 21:22	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			10/17/17 13:42	1

Definitions/Glossary

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

TestAmerica Job ID: 400-144562-1
SDG: Plant McIntosh 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.
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 McIntosh

TestAmerica Job ID: 400-144562-1
SDG: Plant McIntosh Ash Pond

Client Sample ID: MGWA-5

Date Collected: 10/10/17 09:37

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144562-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	373215	10/24/17 18:52	JAW	TAL PEN
Total Recoverable	Prep	3005A			371938	10/15/17 13:42	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 19:07	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372074	10/16/17 16:20	RRC	TAL PEN

Client Sample ID: MGWC-7

Date Collected: 10/10/17 10:00

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144562-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	373215	10/24/17 20:00	JAW	TAL PEN
Total/NA	Analysis	300.0		5	373263	10/25/17 16:04	JAW	TAL PEN
Total Recoverable	Prep	3005A			371938	10/15/17 13:42	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 19:52	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372074	10/16/17 16:20	RRC	TAL PEN

Client Sample ID: MGWA-10

Date Collected: 10/10/17 10:15

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144562-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	373215	10/24/17 20:23	JAW	TAL PEN
Total Recoverable	Prep	3005A			371938	10/15/17 13:42	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 19:56	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372074	10/16/17 16:20	RRC	TAL PEN

Client Sample ID: MGWA-6

Date Collected: 10/10/17 10:51

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144562-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	373215	10/24/17 20:46	JAW	TAL PEN
Total Recoverable	Prep	3005A			371938	10/15/17 13:42	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 20:01	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372074	10/16/17 16:20	RRC	TAL PEN

Client Sample ID: MGWA-11

Date Collected: 10/10/17 11:35

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144562-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	373215	10/24/17 21:09	JAW	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-144562-1
SDG: Plant McIntosh Ash Pond

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			371938	10/15/17 13:42	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 20:05	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372074	10/16/17 16:20	RRC	TAL PEN

Client Sample ID: MGWC-8

Lab Sample ID: 400-144562-6

Date Collected: 10/10/17 11:15

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	373215	10/24/17 21:31	JAW	TAL PEN
Total/NA	Analysis	300.0		10	373263	10/25/17 16:27	JAW	TAL PEN
Total Recoverable	Prep	3005A			371938	10/15/17 13:42	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 20:10	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		371938	10/15/17 13:42	DN1	TAL PEN
Total Recoverable	Analysis	6020	DL	25	372643	10/19/17 20:19	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372074	10/16/17 16:20	RRC	TAL PEN

Client Sample ID: MGWC-3

Lab Sample ID: 400-144562-7

Date Collected: 10/10/17 12:07

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	373215	10/24/17 21:54	JAW	TAL PEN
Total/NA	Analysis	300.0		5	373263	10/25/17 16:50	JAW	TAL PEN
Total Recoverable	Prep	3005A			371938	10/15/17 13:42	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 20:23	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372074	10/16/17 16:20	RRC	TAL PEN

Client Sample ID: MGWC-2

Lab Sample ID: 400-144562-8

Date Collected: 10/10/17 13:00

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		5	373263	10/25/17 11:53	JAW	TAL PEN
Total Recoverable	Prep	3005A	DL		371938	10/15/17 13:42	DN1	TAL PEN
Total Recoverable	Analysis	6020	DL	25	372643	10/19/17 20:59	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372074	10/16/17 16:20	RRC	TAL PEN

Client Sample ID: MGWC-1

Lab Sample ID: 400-144562-9

Date Collected: 10/10/17 14:20

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	373263	10/25/17 17:12	JAW	TAL PEN
Total/NA	Analysis	300.0		5	373328	10/26/17 11:29	JAW	TAL PEN
Total Recoverable	Prep	3005A			371938	10/15/17 13:42	DN1	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-144562-1
SDG: Plant McIntosh Ash Pond

Client Sample ID: MGWC-1

Lab Sample ID: 400-144562-9

Date Collected: 10/10/17 14:20

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 Recoverable	Analysis	6020		5	372643	10/19/17 21:04	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372074	10/16/17 16:20	RRC	TAL PEN

Client Sample ID: MGWC-12

Lab Sample ID: 400-144562-10

Date Collected: 10/10/17 13:26

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	373263	10/25/17 17:58	JAW	TAL PEN
Total Recoverable	Prep	3005A			371938	10/15/17 13:42	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 21:08	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372163	10/17/17 13:42	TET	TAL PEN

Client Sample ID: DUP-1

Lab Sample ID: 400-144562-11

Date Collected: 10/10/17 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	373263	10/25/17 18:21	JAW	TAL PEN
Total/NA	Analysis	300.0		10	373444	10/26/17 15:17	JAW	TAL PEN
Total Recoverable	Prep	3005A			371938	10/15/17 13:42	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 21:13	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		371938	10/15/17 13:42	DN1	TAL PEN
Total Recoverable	Analysis	6020	DL	25	372837	10/20/17 13:49	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	371893	10/14/17 14:50	TET	TAL PEN

Client Sample ID: FB-1

Lab Sample ID: 400-144562-12

Date Collected: 10/10/17 12:39

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	373263	10/25/17 18:44	JAW	TAL PEN
Total Recoverable	Prep	3005A			371938	10/15/17 13:42	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 21:17	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372163	10/17/17 13:42	TET	TAL PEN

Client Sample ID: FERB-1

Lab Sample ID: 400-144562-13

Date Collected: 10/10/17 14:55

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	373263	10/25/17 19:52	JAW	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-144562-1
SDG: Plant McIntosh Ash Pond

Client Sample ID: FERB-1

Date Collected: 10/10/17 14:55

Date Received: 10/13/17 08:31

Lab Sample ID: 400-144562-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			371938	10/15/17 13:42	DN1	TAL PEN
Total Recoverable	Analysis	6020		5	372643	10/19/17 21:22	DRE	TAL PEN
Total/NA	Analysis	SM 2540C		1	372163	10/17/17 13:42	TET	TAL PEN

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 McIntosh

TestAmerica Job ID: 400-144562-1
SDG: Plant McIntosh Ash Pond

HPLC/IC

Analysis Batch: 373215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144562-1	MGWA-5	Total/NA	Water	300.0	
400-144562-2	MGWC-7	Total/NA	Water	300.0	
400-144562-3	MGWA-10	Total/NA	Water	300.0	
400-144562-4	MGWA-6	Total/NA	Water	300.0	
400-144562-5	MGWA-11	Total/NA	Water	300.0	
400-144562-6	MGWC-8	Total/NA	Water	300.0	
400-144562-7	MGWC-3	Total/NA	Water	300.0	
MB 400-373215/4	Method Blank	Total/NA	Water	300.0	
LCS 400-373215/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-373215/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-144556-A-13 MS	Matrix Spike	Total/NA	Water	300.0	
400-144556-A-13 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 373263

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144562-2	MGWC-7	Total/NA	Water	300.0	
400-144562-6	MGWC-8	Total/NA	Water	300.0	
400-144562-7	MGWC-3	Total/NA	Water	300.0	
400-144562-8	MGWC-2	Total/NA	Water	300.0	
400-144562-9	MGWC-1	Total/NA	Water	300.0	
400-144562-10	MGWC-12	Total/NA	Water	300.0	
400-144562-11	DUP-1	Total/NA	Water	300.0	
400-144562-12	FB-1	Total/NA	Water	300.0	
400-144562-13	FERB-1	Total/NA	Water	300.0	
MB 400-373263/4	Method Blank	Total/NA	Water	300.0	
LCS 400-373263/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-373263/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-144562-8 MS	MGWC-2	Total/NA	Water	300.0	
400-144562-8 MSD	MGWC-2	Total/NA	Water	300.0	

Analysis Batch: 373328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144562-9	MGWC-1	Total/NA	Water	300.0	
MB 400-373328/36	Method Blank	Total/NA	Water	300.0	
LCS 400-373328/37	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-373328/38	Lab Control Sample Dup	Total/NA	Water	300.0	
400-144649-A-6 MS	Matrix Spike	Total/NA	Water	300.0	
400-144649-A-6 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 373444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144562-11	DUP-1	Total/NA	Water	300.0	
MB 400-373444/4	Method Blank	Total/NA	Water	300.0	
LCS 400-373444/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-373444/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-144890-J-6 MS	Matrix Spike	Total/NA	Water	300.0	
400-144890-J-6 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

QC Association Summary

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

TestAmerica Job ID: 400-144562-1
SDG: Plant McIntosh Ash Pond

Metals

Prep Batch: 371938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144562-1	MGWA-5	Total Recoverable	Water	3005A	
400-144562-2	MGWC-7	Total Recoverable	Water	3005A	
400-144562-3	MGWA-10	Total Recoverable	Water	3005A	
400-144562-4	MGWA-6	Total Recoverable	Water	3005A	
400-144562-5	MGWA-11	Total Recoverable	Water	3005A	
400-144562-6 - DL	MGWC-8	Total Recoverable	Water	3005A	
400-144562-6	MGWC-8	Total Recoverable	Water	3005A	
400-144562-7	MGWC-3	Total Recoverable	Water	3005A	
400-144562-8 - DL	MGWC-2	Total Recoverable	Water	3005A	
400-144562-9	MGWC-1	Total Recoverable	Water	3005A	
400-144562-10	MGWC-12	Total Recoverable	Water	3005A	
400-144562-11 - DL	DUP-1	Total Recoverable	Water	3005A	
400-144562-11	DUP-1	Total Recoverable	Water	3005A	
400-144562-12	FB-1	Total Recoverable	Water	3005A	
400-144562-13	FERB-1	Total Recoverable	Water	3005A	
MB 400-371938/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-371938/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-144562-1 MS	MGWA-5	Total Recoverable	Water	3005A	
400-144562-1 MSD	MGWA-5	Total Recoverable	Water	3005A	

Analysis Batch: 372643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144562-1	MGWA-5	Total Recoverable	Water	6020	371938
400-144562-2	MGWC-7	Total Recoverable	Water	6020	371938
400-144562-3	MGWA-10	Total Recoverable	Water	6020	371938
400-144562-4	MGWA-6	Total Recoverable	Water	6020	371938
400-144562-5	MGWA-11	Total Recoverable	Water	6020	371938
400-144562-6	MGWC-8	Total Recoverable	Water	6020	371938
400-144562-6 - DL	MGWC-8	Total Recoverable	Water	6020	371938
400-144562-7	MGWC-3	Total Recoverable	Water	6020	371938
400-144562-8 - DL	MGWC-2	Total Recoverable	Water	6020	371938
400-144562-9	MGWC-1	Total Recoverable	Water	6020	371938
400-144562-10	MGWC-12	Total Recoverable	Water	6020	371938
400-144562-11	DUP-1	Total Recoverable	Water	6020	371938
400-144562-12	FB-1	Total Recoverable	Water	6020	371938
400-144562-13	FERB-1	Total Recoverable	Water	6020	371938
MB 400-371938/1-A ^5	Method Blank	Total Recoverable	Water	6020	371938
LCS 400-371938/2-A	Lab Control Sample	Total Recoverable	Water	6020	371938
400-144562-1 MS	MGWA-5	Total Recoverable	Water	6020	371938
400-144562-1 MSD	MGWA-5	Total Recoverable	Water	6020	371938

Analysis Batch: 372837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144562-11 - DL	DUP-1	Total Recoverable	Water	6020	371938

General Chemistry

Analysis Batch: 371893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144562-11	DUP-1	Total/NA	Water	SM 2540C	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-144562-1
SDG: Plant McIntosh Ash Pond

General Chemistry (Continued)

Analysis Batch: 371893 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-371893/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-371893/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-144480-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 372074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144562-1	MGWA-5	Total/NA	Water	SM 2540C	
400-144562-2	MGWC-7	Total/NA	Water	SM 2540C	
400-144562-3	MGWA-10	Total/NA	Water	SM 2540C	
400-144562-4	MGWA-6	Total/NA	Water	SM 2540C	
400-144562-5	MGWA-11	Total/NA	Water	SM 2540C	
400-144562-6	MGWC-8	Total/NA	Water	SM 2540C	
400-144562-7	MGWC-3	Total/NA	Water	SM 2540C	
400-144562-8	MGWC-2	Total/NA	Water	SM 2540C	
400-144562-9	MGWC-1	Total/NA	Water	SM 2540C	
MB 400-372074/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-372074/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-144562-1 DU	MGWA-5	Total/NA	Water	SM 2540C	

Analysis Batch: 372163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-144562-10	MGWC-12	Total/NA	Water	SM 2540C	
400-144562-12	FB-1	Total/NA	Water	SM 2540C	
400-144562-13	FERB-1	Total/NA	Water	SM 2540C	
MB 400-372163/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-372163/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-144507-A-4 DU	Duplicate	Total/NA	Water	SM 2540C	
400-144507-A-6 DU	Duplicate	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-144562-1
SDG: Plant McIntosh Ash Pond

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-373215/4
Matrix: Water
Analysis Batch: 373215

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			10/24/17 10:52	1
Fluoride	<0.082		0.20	0.082	mg/L			10/24/17 10:52	1
Sulfate	<0.70		1.0	0.70	mg/L			10/24/17 10:52	1

Lab Sample ID: LCS 400-373215/5
Matrix: Water
Analysis Batch: 373215

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	10.8		mg/L		108	90 - 110

Lab Sample ID: LCSD 400-373215/6
Matrix: Water
Analysis Batch: 373215

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	10.8		mg/L		108	90 - 110	0	15

Lab Sample ID: 400-144556-A-13 MS
Matrix: Water
Analysis Batch: 373215

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	4.4		10.0	13.9		mg/L		95	80 - 120
Fluoride	0.39		10.0	10.7		mg/L		103	80 - 120
Sulfate	4.3		10.0	15.3		mg/L		110	80 - 120

Lab Sample ID: 400-144556-A-13 MSD
Matrix: Water
Analysis Batch: 373215

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	4.4		10.0	13.9		mg/L		95	80 - 120	0	20
Fluoride	0.39		10.0	10.9		mg/L		105	80 - 120	2	20
Sulfate	4.3		10.0	15.3		mg/L		110	80 - 120	0	20

Lab Sample ID: MB 400-373263/4
Matrix: Water
Analysis Batch: 373263

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			10/25/17 10:44	1
Fluoride	<0.082		0.20	0.082	mg/L			10/25/17 10:44	1
Sulfate	<0.70		1.0	0.70	mg/L			10/25/17 10:44	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144562-1
SDG: Plant McIntosh Ash Pond

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 400-373263/5
Matrix: Water
Analysis Batch: 373263

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	10.6		mg/L		106	90 - 110
Sulfate	10.0	10.7		mg/L		107	90 - 110

Lab Sample ID: LCSD 400-373263/6
Matrix: Water
Analysis Batch: 373263

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	10.8		mg/L		108	90 - 110	0	15

Lab Sample ID: 400-144562-8 MS
Matrix: Water
Analysis Batch: 373263

Client Sample ID: MGWC-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	16		50.0	63.8		mg/L		96	80 - 120
Fluoride	<0.41		50.0	54.1		mg/L		108	80 - 120
Sulfate	240		50.0	283	E 4	mg/L		94	80 - 120

Lab Sample ID: 400-144562-8 MSD
Matrix: Water
Analysis Batch: 373263

Client Sample ID: MGWC-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	16		50.0	63.8		mg/L		96	80 - 120	0	20
Fluoride	<0.41		50.0	54.0		mg/L		108	80 - 120	0	20
Sulfate	240		50.0	284	E 4	mg/L		97	80 - 120	0	20

Lab Sample ID: MB 400-373328/36
Matrix: Water
Analysis Batch: 373328

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			10/25/17 22:55	1
Fluoride	<0.082		0.20	0.082	mg/L			10/25/17 22:55	1
Sulfate	<0.70		1.0	0.70	mg/L			10/25/17 22:55	1

Lab Sample ID: LCS 400-373328/37
Matrix: Water
Analysis Batch: 373328

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	10.9		mg/L		109	90 - 110

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144562-1
SDG: Plant McIntosh Ash Pond

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 400-373328/38
Matrix: Water
Analysis Batch: 373328

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	10.7		mg/L		107	90 - 110	1	15
Sulfate	10.0	10.8		mg/L		108	90 - 110	1	15

Lab Sample ID: 400-144649-A-6 MS
Matrix: Water
Analysis Batch: 373328

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	35		50.0	84.3		mg/L		98	80 - 120		
Fluoride	<0.41		50.0	55.6		mg/L		111	80 - 120		
Sulfate	390	E	50.0	451	E 4	mg/L		123	80 - 120		

Lab Sample ID: 400-144649-A-6 MSD
Matrix: Water
Analysis Batch: 373328

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	35		50.0	83.9		mg/L		97	80 - 120	0	20
Fluoride	<0.41		50.0	55.8		mg/L		112	80 - 120	0	20
Sulfate	390	E	50.0	451	E 4	mg/L		125	80 - 120	0	20

Lab Sample ID: MB 400-373444/4
Matrix: Water
Analysis Batch: 373444

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			10/26/17 13:00	1
Fluoride	<0.082		0.20	0.082	mg/L			10/26/17 13:00	1
Sulfate	<0.70		1.0	0.70	mg/L			10/26/17 13:00	1

Lab Sample ID: LCS 400-373444/5
Matrix: Water
Analysis Batch: 373444

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	10.2		mg/L		102	90 - 110		
Fluoride	10.0	10.8		mg/L		108	90 - 110		
Sulfate	10.0	10.9		mg/L		109	90 - 110		

Lab Sample ID: LCSD 400-373444/6
Matrix: Water
Analysis Batch: 373444

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	10.6		mg/L		106	90 - 110	2	15
Sulfate	10.0	11.0		mg/L		110	90 - 110	0	15

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144562-1
SDG: Plant McIntosh Ash Pond

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 400-144890-J-6 MS
Matrix: Water
Analysis Batch: 373444

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	130	E	10.0	132	E 4	mg/L		55	80 - 120
Fluoride	0.38		10.0	10.9		mg/L		105	80 - 120
Sulfate	18		10.0	28.8		mg/L		110	80 - 120

Lab Sample ID: 400-144890-J-6 MSD
Matrix: Water
Analysis Batch: 373444

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	130	E	10.0	132	E 4	mg/L		51	80 - 120	0	20
Fluoride	0.38		10.0	11.1		mg/L		107	80 - 120	1	20
Sulfate	18		10.0	28.7		mg/L		109	80 - 120	0	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-371938/1-A ^5
Matrix: Water
Analysis Batch: 372643

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 371938

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.021		0.050	0.021	mg/L		10/15/17 13:42	10/19/17 18:31	5
Calcium	<0.13		0.25	0.13	mg/L		10/15/17 13:42	10/19/17 18:31	5

Lab Sample ID: LCS 400-371938/2-A
Matrix: Water
Analysis Batch: 372643

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 371938

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.100	0.0987		mg/L		99	80 - 120
Calcium	5.00	5.17		mg/L		103	80 - 120

Lab Sample ID: 400-144562-1 MS
Matrix: Water
Analysis Batch: 372643

Client Sample ID: MGWA-5
Prep Type: Total Recoverable
Prep Batch: 371938

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	<0.021		0.100	0.125		mg/L		125	75 - 125
Calcium	31		5.00	35.8	4	mg/L		102	75 - 125

Lab Sample ID: 400-144562-1 MSD
Matrix: Water
Analysis Batch: 372643

Client Sample ID: MGWA-5
Prep Type: Total Recoverable
Prep Batch: 371938

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	<0.021		0.100	0.124		mg/L		124	75 - 125	1	20
Calcium	31		5.00	35.3	4	mg/L		94	75 - 125	1	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144562-1
SDG: Plant McIntosh Ash Pond

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

Lab Sample ID: MB 400-371893/1
Matrix: Water
Analysis Batch: 371893

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			10/14/17 14:50	1

Lab Sample ID: LCS 400-371893/2
Matrix: Water
Analysis Batch: 371893

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	290		mg/L		99	78 - 122

Lab Sample ID: 400-144480-A-1 DU
Matrix: Water
Analysis Batch: 371893

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	230		234		mg/L		0	5

Lab Sample ID: MB 400-372074/1
Matrix: Water
Analysis Batch: 372074

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 16:20	1

Lab Sample ID: LCS 400-372074/2
Matrix: Water
Analysis Batch: 372074

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: 400-144562-1 DU
Matrix: Water
Analysis Batch: 372074

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	190		192		mg/L		0	5

Lab Sample ID: MB 400-372163/1
Matrix: Water
Analysis Batch: 372163

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			10/17/17 13:42	1

Lab Sample ID: LCS 400-372163/2
Matrix: Water
Analysis Batch: 372163

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	293	272		mg/L		93	78 - 122

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-144562-1
 SDG: Plant McIntosh Ash Pond

Lab Sample ID: 400-144507-A-4 DU
Matrix: Water
Analysis Batch: 372163

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	410		406		mg/L		0	5

Lab Sample ID: 400-144507-A-6 DU
Matrix: Water
Analysis Batch: 372163

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	5

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Chain of Custody Record

Company: Southern Company
 Address: 42 Inverness Center Parkway
 City: Birmingham
 State, Zip: AL, 35242
 Phone: 205-992-5417
 Email: LMPETTY@southernco.com
 Project Name: Plant McIntosh - Ash Pond
 Site: CCR

Carrier Tracking No(s):
 Lab PM: Whitnir, Cheyenne R
 P. Harold, H. Beaug, V. Thomas
 E-Mail: cheyenne.whitnir@testamericainc.com

COC No: _____
 Page: 1 of 2
 Job #: _____

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 MS/MSD (Yes or No)		Metals - (Part 257 Appendix III) EPA 6020: B & Ca		Total Number of Containers	Special Instructions/Note:
					Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Metals - (Part 257 Appendix III) EPA 6020: B & Ca	Metals - (Part 257 Appendix III) EPA 6020: B & Ca	Total Number of Containers		
MGWA-5	10/10/17	0937	G	W	N	N	N	N	1	1	2	
MGWC-7	10/10/17	1000	G	W	N	N	N	N	1	1	2	
MGWA-10	10/10/17	1015	G	W	N	N	N	N	1	1	2	
MGWA-6	10/10/17	1051	G	W	N	N	N	N	1	1	2	
MGWA-11	10/10/17	1135	G	W	N	N	N	N	1	1	2	
MGWC-8	10/10/17	1115	G	W	N	N	N	N	1	1	2	
MGWC-3	10/10/17	1207	G	W	N	N	N	N	1	1	2	
MGWC-2	10/10/17	1300	G	W	N	N	N	N	1	1	2	
MGWC-1	10/10/17	1420	G	W	N	N	N	N	1	1	2	
MGWC-12	10/10/17	1326	G	W	N	N	N	N	1	1	2	
DUP-1	10/10/17	--	G	W	N	N	N	N	1	1	2	

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: 10-12-17 Company: ERM
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seal No.: PEN. 0.0°C 10.0°C 428
 Cooler Temperature(s) °C and Other Remarks: 0.3/1.1/2.2/10.5/11.1/11.4/12.5/12.8/11.7

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:
 Received by: _____ Date/Time: 10/12/17 17:30 Company: TASA
 Received by: _____ Date/Time: 10/13/17 08:31 Company: TASA
 Received by: _____ Date/Time: _____ Company: _____



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

Chain of Custody Record

Sampler: M. Thomas
Lab PM: Whitmire, Cheyenne R
Carrier Tracking No(s):
Client Contact: Lauren Petty
Phone: cheyenne.whitmire@testamericainc.com
E-Mail: cheyenne.whitmire@testamericainc.com
Company: Southern Company
Address: 42 Inverness Center Parkway
City: Birmingham
State, Zip: AL, 35242
Phone: 205-992-5417
Email: LMPETTY@southernco.com
Project Name: Plant McIntosh - 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=water, A=Air)	Preservation Code:	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Metals - (Part 257 Appendix III) EPA 6020; B & Ca		Total Number of Containers	Special Instructions/Note:
						I	D	I	D	I	D		
FB-1	10/10/17	1239	G	W		X	X	N	N	1	1	2	
FERB-1	10/10/17	1455	G	W		X	X	N	N	1	1	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: _____
 Relinquished by: _____ Date/Time: 10-12-17 1730 Company: TMA
 Relinquished by: _____ Date/Time: 10/12/17 1730 Company: TASA
 Relinquished by: _____ Date/Time: 10/13/17 0831 Company: TASA
 Relinquished by: _____ Date/Time: _____ Company: _____
 Custody Seals Intact: Yes No
 Custody Seal No.: 0.8117
 Cooler Temperature(s) °C and Other Remarks: 0.31-12.21(0.51-4 CCA-0.3) 0.60.4/2.5



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-144562-1
SDG Number: Plant McIntosh Ash Pond

Login Number: 144562

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C, 0.0°C IR-8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Accreditation/Certification Summary

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

TestAmerica Job ID: 400-144562-1
 SDG: Plant McIntosh 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



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: 400-140650-2

TestAmerica Sample Delivery Group: Plant McIntosh Ash Pond

Client Project/Site: CCR - Plant McIntosh


For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

8/18/2017 11:57:43 AM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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www.testamericainc.com

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

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

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

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Case Narrative

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

TestAmerica Job ID: 400-140650-2
SDG: Plant McIntosh Ash Pond

Job ID: 400-140650-2

Laboratory: TestAmerica Pensacola

Narrative

**Job Narrative
400-140650-2**

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-318894. 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. MGWA-11 (400-140650-1), MGWC-12 (400-140650-2), DUP-1 (400-140650-3), FB-1 (400-140650-4) and FERB-1 (400-140650-5)

Method(s) PrecSep-21: Radium 226 Prep batch 160-318872. 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. MGWA-11 (400-140650-1), MGWC-12 (400-140650-2), DUP-1 (400-140650-3), FB-1 (400-140650-4) and FERB-1 (400-140650-5)



Method Summary

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

TestAmerica Job ID: 400-140650-2
SDG: Plant McIntosh 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 McIntosh

TestAmerica Job ID: 400-140650-2
SDG: Plant McIntosh Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-140650-1	MGWA-11	Water	07/13/17 13:40	07/13/17 17:30
400-140650-2	MGWC-12	Water	07/13/17 15:18	07/13/17 17:30
400-140650-3	DUP-1	Water	07/13/17 00:00	07/13/17 17:30
400-140650-4	FB-1	Water	07/13/17 15:00	07/13/17 17:30
400-140650-5	FERB-1	Water	07/13/17 15:50	07/13/17 17:30

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Client Sample Results

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

TestAmerica Job ID: 400-140650-2
SDG: Plant McIntosh Ash Pond

Client Sample ID: MGWA-11

Date Collected: 07/13/17 13:40

Date Received: 07/13/17 17:30

Lab Sample ID: 400-140650-1

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	0.196		0.0974	0.0990	1.00	0.107	pCi/L	07/24/17 09:46	08/15/17 08:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.0		40 - 110					07/24/17 09:46	08/15/17 08:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.483		0.215	0.220	1.00	0.307	pCi/L	07/24/17 10:18	08/07/17 20:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.0		40 - 110					07/24/17 10:18	08/07/17 20:32	1
Y Carrier	106		40 - 110					07/24/17 10:18	08/07/17 20:32	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.679		0.236	0.241	5.00	0.307	pCi/L		08/15/17 14:52	1

Client Sample Results

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

TestAmerica Job ID: 400-140650-2
SDG: Plant McIntosh Ash Pond

Client Sample ID: MGWC-12

Lab Sample ID: 400-140650-2

Date Collected: 07/13/17 15:18

Matrix: Water

Date Received: 07/13/17 17:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.162		0.0921	0.0933	1.00	0.116	pCi/L	07/24/17 09:46	08/15/17 08:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.2		40 - 110					07/24/17 09:46	08/15/17 08:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.307		0.194	0.196	1.00	0.294	pCi/L	07/24/17 10:18	08/07/17 20:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.2		40 - 110					07/24/17 10:18	08/07/17 20:32	1
Y Carrier	104		40 - 110					07/24/17 10:18	08/07/17 20:32	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.470		0.215	0.217	5.00	0.294	pCi/L		08/15/17 14:52	1

Client Sample Results

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

TestAmerica Job ID: 400-140650-2
SDG: Plant McIntosh Ash Pond

Client Sample ID: DUP-1

Date Collected: 07/13/17 00:00

Date Received: 07/13/17 17:30

Lab Sample ID: 400-140650-3

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	0.183		0.0897	0.0912	1.00	0.0988	pCi/L	07/24/17 09:46	08/15/17 08:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110					07/24/17 09:46	08/15/17 08:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.442		0.192	0.196	1.00	0.267	pCi/L	07/24/17 10:18	08/07/17 20:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110					07/24/17 10:18	08/07/17 20:32	1
Y Carrier	105		40 - 110					07/24/17 10:18	08/07/17 20:32	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.625		0.212	0.216	5.00	0.267	pCi/L		08/15/17 14:52	1

Client Sample Results

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

TestAmerica Job ID: 400-140650-2
SDG: Plant McIntosh Ash Pond

Client Sample ID: FB-1
Date Collected: 07/13/17 15:00
Date Received: 07/13/17 17:30

Lab Sample ID: 400-140650-4
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	0.0260	U	0.0582	0.0583	1.00	0.107	pCi/L	07/24/17 09:46	08/15/17 08:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					07/24/17 09:46	08/15/17 08:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.153	U	0.157	0.158	1.00	0.312	pCi/L	07/24/17 10:18	08/07/17 20:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		40 - 110					07/24/17 10:18	08/07/17 20:32	1
Y Carrier	101		40 - 110					07/24/17 10:18	08/07/17 20:32	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.127	U	0.168	0.168	5.00	0.312	pCi/L		08/15/17 14:52	1

Client Sample Results

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

TestAmerica Job ID: 400-140650-2
 SDG: Plant McIntosh Ash Pond

Client Sample ID: FERB-1

Lab Sample ID: 400-140650-5

Date Collected: 07/13/17 15:50

Matrix: Water

Date Received: 07/13/17 17:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0393	U	0.0596	0.0597	1.00	0.103	pCi/L	07/24/17 09:46	08/15/17 08:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					07/24/17 09:46	08/15/17 08:58	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.231	U	0.185	0.186	1.00	0.293	pCi/L	07/24/17 10:18	08/07/17 20:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					07/24/17 10:18	08/07/17 20:32	1
Y Carrier	106		40 - 110					07/24/17 10:18	08/07/17 20:32	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.270	U	0.195	0.196	5.00	0.293	pCi/L		08/15/17 14:52	1

Definitions/Glossary

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

TestAmerica Job ID: 400-140650-2
SDG: Plant McIntosh 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 McIntosh

TestAmerica Job ID: 400-140650-2
SDG: Plant McIntosh Ash Pond

Client Sample ID: MGWA-11

Date Collected: 07/13/17 13:40

Date Received: 07/13/17 17:30

Lab Sample ID: 400-140650-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318872	07/24/17 09:46	LDE	TAL SL
Total/NA	Analysis	9315		1	322277	08/15/17 08:58	ALD	TAL SL
Total/NA	Prep	PrecSep_0			318894	07/24/17 10:18	LDE	TAL SL
Total/NA	Analysis	9320		1	321226	08/07/17 20:32	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322313	08/15/17 14:52	RTM	TAL SL

Client Sample ID: MGWC-12

Date Collected: 07/13/17 15:18

Date Received: 07/13/17 17:30

Lab Sample ID: 400-140650-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318872	07/24/17 09:46	LDE	TAL SL
Total/NA	Analysis	9315		1	322277	08/15/17 08:58	ALD	TAL SL
Total/NA	Prep	PrecSep_0			318894	07/24/17 10:18	LDE	TAL SL
Total/NA	Analysis	9320		1	321226	08/07/17 20:32	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322313	08/15/17 14:52	RTM	TAL SL

Client Sample ID: DUP-1

Date Collected: 07/13/17 00:00

Date Received: 07/13/17 17:30

Lab Sample ID: 400-140650-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318872	07/24/17 09:46	LDE	TAL SL
Total/NA	Analysis	9315		1	322277	08/15/17 08:58	ALD	TAL SL
Total/NA	Prep	PrecSep_0			318894	07/24/17 10:18	LDE	TAL SL
Total/NA	Analysis	9320		1	321226	08/07/17 20:32	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322313	08/15/17 14:52	RTM	TAL SL

Client Sample ID: FB-1

Date Collected: 07/13/17 15:00

Date Received: 07/13/17 17:30

Lab Sample ID: 400-140650-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318872	07/24/17 09:46	LDE	TAL SL
Total/NA	Analysis	9315		1	322277	08/15/17 08:58	ALD	TAL SL
Total/NA	Prep	PrecSep_0			318894	07/24/17 10:18	LDE	TAL SL
Total/NA	Analysis	9320		1	321226	08/07/17 20:32	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322313	08/15/17 14:52	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-140650-2
SDG: Plant McIntosh Ash Pond

Client Sample ID: FERB-1

Date Collected: 07/13/17 15:50

Date Received: 07/13/17 17:30

Lab Sample ID: 400-140650-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			318872	07/24/17 09:46	LDE	TAL SL
Total/NA	Analysis	9315		1	322277	08/15/17 08:58	ALD	TAL SL
Total/NA	Prep	PrecSep_0			318894	07/24/17 10:18	LDE	TAL SL
Total/NA	Analysis	9320		1	321226	08/07/17 20:32	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	322313	08/15/17 14:52	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 McIntosh

TestAmerica Job ID: 400-140650-2
SDG: Plant McIntosh Ash Pond

Rad

Prep Batch: 318872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140650-1	MGWA-11	Total/NA	Water	PrecSep-21	
400-140650-2	MGWC-12	Total/NA	Water	PrecSep-21	
400-140650-3	DUP-1	Total/NA	Water	PrecSep-21	
400-140650-4	FB-1	Total/NA	Water	PrecSep-21	
400-140650-5	FERB-1	Total/NA	Water	PrecSep-21	
MB 160-318872/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-318872/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-318872/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 318894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-140650-1	MGWA-11	Total/NA	Water	PrecSep_0	
400-140650-2	MGWC-12	Total/NA	Water	PrecSep_0	
400-140650-3	DUP-1	Total/NA	Water	PrecSep_0	
400-140650-4	FB-1	Total/NA	Water	PrecSep_0	
400-140650-5	FERB-1	Total/NA	Water	PrecSep_0	
MB 160-318894/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-318894/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-318894/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-140650-2
SDG: Plant McIntosh Ash Pond

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-318872/1-A
Matrix: Water
Analysis Batch: 322277

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318872

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.07023	U	0.0840	0.0842	1.00	0.138	pCi/L	07/24/17 09:46	08/15/17 08:58	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		40 - 110						
	88.5					07/24/17 09:46	08/15/17 08:58	1		

Lab Sample ID: LCS 160-318872/2-A
Matrix: Water
Analysis Batch: 322277

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318872

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.4	12.92		1.35	1.00	0.106	pCi/L	114	68 - 137
Carrier	LCS LCS		Limits			Prepared	Analyzed	Dil Fac	
Ba Carrier	%Yield	Qualifier		40 - 110					
	90.6								

Lab Sample ID: LCSD 160-318872/3-A
Matrix: Water
Analysis Batch: 322277

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 318872

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
				Uncert. (2σ+/-)							
Radium-226	11.4	11.95		1.25	1.00	0.0951	pCi/L	105	68 - 137	0.38	1
Carrier	LCSD LCSD		Limits			Prepared	Analyzed	Dil Fac			
Ba Carrier	%Yield	Qualifier		40 - 110							
	95.3										

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-318894/1-A
Matrix: Water
Analysis Batch: 321226

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 318894

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.3032	U	0.206	0.208	1.00	0.317	pCi/L	07/24/17 10:18	08/07/17 20:31	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	%Yield	Qualifier		40 - 110						
	88.5					07/24/17 10:18	08/07/17 20:31	1		
Y Carrier	%Yield	Qualifier	40 - 110							
	97.7					07/24/17 10:18	08/07/17 20:31	1		

QC Sample Results

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

TestAmerica Job ID: 400-140650-2
 SDG: Plant McIntosh Ash Pond

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

Lab Sample ID: LCS 160-318894/2-A
Matrix: Water
Analysis Batch: 321226

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 318894

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.1	12.68		1.35	1.00	0.250	pCi/L	97	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	90.6		40 - 110
Y Carrier	107		40 - 110

Lab Sample ID: LCSD 160-318894/3-A
Matrix: Water
Analysis Batch: 321226

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 318894

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	13.1	12.41		1.33	1.00	0.297	pCi/L	95	56 - 140	0.10	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	95.3		40 - 110
Y Carrier	100		40 - 110

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-140650-2
SDG Number: Plant McIntosh Ash Pond

Login Number: 140650

List Number: 1

Creator: Hughes, Nicholas T

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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	1.6°C, 2.3°C
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 McIntosh

TestAmerica Job ID: 400-140650-2
SDG: Plant McIntosh 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 McIntosh

TestAmerica Job ID: 400-140650-2
SDG: Plant McIntosh 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: 400-137061-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR - Plant McIntosh

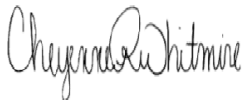
For:

Southern Company

600 18th Street North

Birmingham, Alabama 35203

Attn: Accounts Payable



Authorized for release by:

5/31/2017 4:11:41 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

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

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

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Method Summary

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

TestAmerica Job ID: 400-137061-2
SDG: Ash Pond

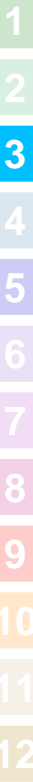
Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

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 McIntosh

TestAmerica Job ID: 400-137061-2
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-137061-1	MGWC-12-20170425	Water	04/25/17 12:25	04/27/17 09:15
400-137061-2	DUP-1	Water	04/25/17 00:00	04/27/17 09:15

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Client Sample Results

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

TestAmerica Job ID: 400-137061-2
SDG: Ash Pond

Client Sample ID: MGWC-12-20170425

Lab Sample ID: 400-137061-1

Date Collected: 04/25/17 12:25

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	0.178		0.0852	0.0867	1.00	0.0984	pCi/L	05/05/17 07:55	05/29/17 20:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		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	0.213	U	0.214	0.215	1.00	0.347	pCi/L	05/05/17 08:21	05/19/17 16:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					05/05/17 08:21	05/19/17 16:01	1
Y Carrier	86.0		40 - 110					05/05/17 08:21	05/19/17 16:01	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.391		0.230	0.232	5.00	0.347	pCi/L		05/31/17 14:25	1

Client Sample Results

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

TestAmerica Job ID: 400-137061-2
 SDG: Ash Pond

Client Sample ID: DUP-1

Lab Sample ID: 400-137061-2

Date Collected: 04/25/17 00:00

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	0.169		0.0774	0.0789	1.00	0.0826	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	0.101	U	0.226	0.226	1.00	0.387	pCi/L	05/05/17 08:21	05/19/17 16:01	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.1		40 - 110					05/05/17 08:21	05/19/17 16:01	1
Y Carrier	86.4		40 - 110					05/05/17 08:21	05/19/17 16:01	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.270	U	0.239	0.239	5.00	0.387	pCi/L		05/31/17 14:25	1

Definitions/Glossary

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

TestAmerica Job ID: 400-137061-2
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 McIntosh

TestAmerica Job ID: 400-137061-2
SDG: Ash Pond

Client Sample ID: MGWC-12-20170425

Date Collected: 04/25/17 12:25

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137061-1

Matrix: Water

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 16:01	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	311374	05/31/17 14:25	RTM	TAL SL

Client Sample ID: DUP-1

Date Collected: 04/25/17 00:00

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137061-2

Matrix: Water

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 16:01	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 McIntosh

TestAmerica Job ID: 400-137061-2
SDG: Ash Pond

Rad

Prep Batch: 307323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137061-1	MGWC-12-20170425	Total/NA	Water	PrecSep-21	
400-137061-2	DUP-1	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-A-4-A DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 307327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137061-1	MGWC-12-20170425	Total/NA	Water	PrecSep_0	
400-137061-2	DUP-1	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-A-4-B DU	Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-137061-2
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 Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
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 %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.4		40 - 110					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 Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	10.33		1.07	1.00	0.0944	pCi/L	91	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	104		40 - 110						

Lab Sample ID: 400-137162-A-4-A DU
Matrix: Water
Analysis Batch: 310981

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 307323

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.238		0.2189		0.0940	1.00	0.102	pCi/L	0.10	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	97.3		40 - 110							

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 Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
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 %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.4		40 - 110					05/05/17 08:21	05/19/17 16:01	1
Y Carrier	85.6		40 - 110					05/05/17 08:21	05/19/17 16:01	1

QC Sample Results

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

TestAmerica Job ID: 400-137061-2
 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

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	104		40 - 110
Y Carrier	90.5		40 - 110

Lab Sample ID: 400-137162-A-4-B DU
Matrix: Water
Analysis Batch: 309640

Client Sample ID: Duplicate
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

Carrier	DU %Yield	DU Qualifier	Limits
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-A-4 DU
Matrix: Water
Analysis Batch: 311374

Client Sample ID: Duplicate
Prep Type: Total/NA

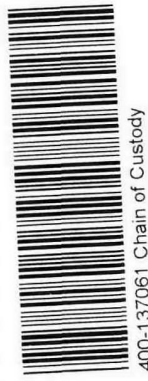
Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Combined Radium 226 + 228	0.408	U	0.3462	U	0.243	5.00	0.380	pCi/L	0.11	

Chain of Custody Record

Sampler: C. Hurdle ☐; M. Thomas ☒
 Lab PM: Whitmire, Cheyenne R
 Carrier Tracking No(s):
 Client Contact: Lauren Petty
 Phone: cheyenne.whitmire@testamericainc.co
 E-Mail:
 Company: Southern Company
 Address: 42 Inverness Center Parkway
 City: Birmingham
 State, Zip: AL, 35242
 Phone: 205-992-5417
 Email: lmpetty@southernco.com
 Project Name: Plant McIntosh - Ash Pond
 Site: CCR

Due Date Requested:
 TAT Requested (days):
 PO #:
 WO #:
 Project #:
 SSOW#: CCR

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Oil, BT, Tissue, A=As)	Field Filtered Sample (Yes or No)		Form 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	MS/MSD	Field Filtered	MS/MSD	I	D			
MGWC-12-20170425	4/25/17	12:25	G	GW					X	X	X	3	
DUP-1	4/25/17	-	G	GW					X	X	X	3	



Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Polystyrene 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 _____ Month

Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: _____ Date/Time: 4-26-17 1004 Company: *FEEM*
 Relinquished by: _____ Date/Time: 4/27/17 0915 Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____
 Custody Seals Intact: Custody Seal No.: 400-137061
 Δ Yes Δ No
 Cooler Temperature(s) °C and Other Remarks: 7.1/3.9 (39/2.7) 0.0 IR 7

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-137061-2

SDG Number: Ash Pond

Login Number: 137061

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR-7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Accreditation/Certification Summary

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

TestAmerica Job ID: 400-137061-2
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 McIntosh

TestAmerica Job ID: 400-137061-2
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: 400-137061-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR - Plant McIntosh

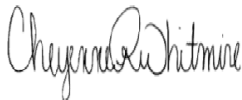
For:

Southern Company

600 18th Street North

Birmingham, Alabama 35203

Attn: Accounts Payable



Authorized for release by:

5/12/2017 4:59:07 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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

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

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

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Detection Summary

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

TestAmerica Job ID: 400-137061-1
 SDG: Ash Pond

Client Sample ID: MGWC-12-20170425

Lab Sample ID: 400-137061-1

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	0.25		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	4.4		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	26		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.013		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	170		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-1

Lab Sample ID: 400-137061-2

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	0.25		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	4.4		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.00056	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.041		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	25		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.013		0.0050	0.0032	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 McIntosh

TestAmerica Job ID: 400-137061-1
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 McIntosh

TestAmerica Job ID: 400-137061-1
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-137061-1	MGWC-12-20170425	Water	04/25/17 12:25	04/27/17 09:15
400-137061-2	DUP-1	Water	04/25/17 00:00	04/27/17 09:15

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Client Sample Results

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

TestAmerica Job ID: 400-137061-1
SDG: Ash Pond

Client Sample ID: MGWC-12-20170425

Lab Sample ID: 400-137061-1

Date Collected: 04/25/17 12:25

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			04/29/17 05:55	1
Fluoride	0.25		0.20	0.082	mg/L			04/29/17 05:55	1
Sulfate	4.4		1.0	0.70	mg/L			04/29/17 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		05/08/17 16:12	05/09/17 15:58	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/08/17 16:12	05/09/17 15:58	5
Barium	0.042		0.0025	0.00049	mg/L		05/08/17 16:12	05/09/17 15:58	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:12	05/09/17 15:58	5
Boron	<0.021		0.050	0.021	mg/L		05/08/17 16:12	05/09/17 15:58	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:12	05/09/17 15:58	5
Calcium	26		0.25	0.13	mg/L		05/08/17 16:12	05/09/17 15:58	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/08/17 16:12	05/09/17 15:58	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/08/17 16:12	05/09/17 15:58	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:12	05/09/17 15:58	5
Lithium	0.013		0.0050	0.0032	mg/L		05/08/17 16:12	05/09/17 15:58	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/08/17 16:12	05/09/17 15:58	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/08/17 16:12	05/09/17 15:58	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/08/17 16:12	05/09/17 15:58	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 14:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	170		5.0	3.4	mg/L			04/29/17 15:11	1

Client Sample Results

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

TestAmerica Job ID: 400-137061-1
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: 400-137061-2

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			04/29/17 06:18	1
Fluoride	0.25		0.20	0.082	mg/L			04/29/17 06:18	1
Sulfate	4.4		1.0	0.70	mg/L			04/29/17 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		05/08/17 16:12	05/09/17 16:03	5
Arsenic	0.00056	J	0.0013	0.00046	mg/L		05/08/17 16:12	05/09/17 16:03	5
Barium	0.041		0.0025	0.00049	mg/L		05/08/17 16:12	05/09/17 16:03	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:12	05/09/17 16:03	5
Boron	<0.021		0.050	0.021	mg/L		05/08/17 16:12	05/09/17 16:03	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:12	05/09/17 16:03	5
Calcium	25		0.25	0.13	mg/L		05/08/17 16:12	05/09/17 16:03	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/08/17 16:12	05/09/17 16:03	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/08/17 16:12	05/09/17 16:03	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:12	05/09/17 16:03	5
Lithium	0.013		0.0050	0.0032	mg/L		05/08/17 16:12	05/09/17 16:03	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/08/17 16:12	05/09/17 16:03	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/08/17 16:12	05/09/17 16:03	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/08/17 16:12	05/09/17 16:03	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		05/06/17 13:31	05/08/17 14:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	150		5.0	3.4	mg/L			04/29/17 14:20	1

Definitions/Glossary

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

TestAmerica Job ID: 400-137061-1
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.

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 McIntosh

TestAmerica Job ID: 400-137061-1
SDG: Ash Pond

Client Sample ID: MGWC-12-20170425

Date Collected: 04/25/17 12:25

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137061-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351751	04/29/17 05:55	KH1	TAL PEN
Total Recoverable	Prep	3005A			352816	05/08/17 16:12	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353042	05/09/17 15:58	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 14:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351822	04/29/17 15:11	TET	TAL PEN

Client Sample ID: DUP-1

Date Collected: 04/25/17 00:00

Date Received: 04/27/17 09:15

Lab Sample ID: 400-137061-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351751	04/29/17 06:18	KH1	TAL PEN
Total Recoverable	Prep	3005A			352816	05/08/17 16:12	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	353042	05/09/17 16:03	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 14:39	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 McIntosh

TestAmerica Job ID: 400-137061-1
SDG: Ash Pond

HPLC/IC

Analysis Batch: 351751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137061-1	MGWC-12-20170425	Total/NA	Water	300.0	
400-137061-2	DUP-1	Total/NA	Water	300.0	
MB 400-351751/38	Method Blank	Total/NA	Water	300.0	
LCS 400-351751/39	Lab Control Sample	Total/NA	Water	300.0	
LCS 400-351751/40	Lab Control Sample Dup	Total/NA	Water	300.0	
400-136907-D-1 MS	Matrix Spike	Total/NA	Water	300.0	
400-136907-D-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
400-137061-1	MGWC-12-20170425	Total/NA	Water	7470A	
400-137061-2	DUP-1	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-B-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-137162-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 352802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137061-1	MGWC-12-20170425	Total/NA	Water	7470A	352392
400-137061-2	DUP-1	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-B-1-B MS	Matrix Spike	Total/NA	Water	7470A	352392
400-137162-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	352392

Prep Batch: 352816

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137061-1	MGWC-12-20170425	Total Recoverable	Water	3005A	
400-137061-2	DUP-1	Total Recoverable	Water	3005A	
MB 400-352816/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-352816/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-137064-C-1-C MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
400-137064-C-1-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 353042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137061-1	MGWC-12-20170425	Total Recoverable	Water	6020	352816
400-137061-2	DUP-1	Total Recoverable	Water	6020	352816
MB 400-352816/1-A ^5	Method Blank	Total Recoverable	Water	6020	352816
LCS 400-352816/2-A	Lab Control Sample	Total Recoverable	Water	6020	352816
400-137064-C-1-C MS ^5	Matrix Spike	Total Recoverable	Water	6020	352816
400-137064-C-1-D MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6020	352816

QC Association Summary

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

TestAmerica Job ID: 400-137061-1
SDG: Ash Pond

General Chemistry

Analysis Batch: 351821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137061-2	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	
400-137046-B-4 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 351822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137061-1	MGWC-12-20170425	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	

QC Sample Results

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

TestAmerica Job ID: 400-137061-1
SDG: Ash Pond

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-351751/38
Matrix: Water
Analysis Batch: 351751

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			04/28/17 23:27	1
Fluoride	<0.082		0.20	0.082	mg/L			04/28/17 23:27	1
Sulfate	<0.70		1.0	0.70	mg/L			04/28/17 23:27	1

Lab Sample ID: LCS 400-351751/39
Matrix: Water
Analysis Batch: 351751

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	9.91		mg/L		99	90 - 110
Fluoride	10.0	10.4		mg/L		104	90 - 110
Sulfate	10.0	9.87		mg/L		99	90 - 110

Lab Sample ID: LCSD 400-351751/40
Matrix: Water
Analysis Batch: 351751

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	10.4		mg/L		104	90 - 110	0	15
Sulfate	10.0	9.91		mg/L		99	90 - 110	0	15

Lab Sample ID: 400-136907-D-1 MS
Matrix: Water
Analysis Batch: 351751

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	97	E	10.0	102	E 4	mg/L		55	80 - 120
Fluoride	0.21		10.0	10.5		mg/L		103	80 - 120
Sulfate	6.7		10.0	17.0		mg/L		102	80 - 120

Lab Sample ID: 400-136907-D-1 MSD
Matrix: Water
Analysis Batch: 351751

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	97	E	10.0	103	E 4	mg/L		57	80 - 120	0	20
Fluoride	0.21		10.0	10.5		mg/L		103	80 - 120	0	20
Sulfate	6.7		10.0	17.0		mg/L		102	80 - 120	0	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-352816/1-A ^5
Matrix: Water
Analysis Batch: 353042

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 352816

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 16:12	05/09/17 14:46	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/08/17 16:12	05/09/17 14:46	5

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-137061-1
SDG: Ash Pond

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

Lab Sample ID: MB 400-352816/1-A ^5
Matrix: Water
Analysis Batch: 353042

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 352816

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00049		0.0025	0.00049	mg/L		05/08/17 16:12	05/09/17 14:46	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:12	05/09/17 14:46	5
Boron	<0.021		0.050	0.021	mg/L		05/08/17 16:12	05/09/17 14:46	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/08/17 16:12	05/09/17 14:46	5
Calcium	<0.13		0.25	0.13	mg/L		05/08/17 16:12	05/09/17 14:46	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/08/17 16:12	05/09/17 14:46	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/08/17 16:12	05/09/17 14:46	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/08/17 16:12	05/09/17 14:46	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/08/17 16:12	05/09/17 14:46	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/08/17 16:12	05/09/17 14:46	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/08/17 16:12	05/09/17 14:46	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/08/17 16:12	05/09/17 14:46	5

Lab Sample ID: LCS 400-352816/2-A
Matrix: Water
Analysis Batch: 353042

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 352816

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0560		mg/L		112	80 - 120
Arsenic	0.0500	0.0501		mg/L		100	80 - 120
Barium	0.0500	0.0485		mg/L		97	80 - 120
Beryllium	0.0500	0.0503		mg/L		101	80 - 120
Boron	0.100	0.0990		mg/L		99	80 - 120
Cadmium	0.0500	0.0515		mg/L		103	80 - 120
Calcium	5.00	4.75		mg/L		95	80 - 120
Chromium	0.0500	0.0485		mg/L		97	80 - 120
Cobalt	0.0500	0.0533		mg/L		107	80 - 120
Lead	0.0500	0.0508		mg/L		102	80 - 120
Lithium	0.0500	0.0507		mg/L		101	80 - 120
Molybdenum	0.100	0.0992		mg/L		99	80 - 120
Selenium	0.0500	0.0514		mg/L		103	80 - 120
Thallium	0.0100	0.00986		mg/L		99	80 - 120

Lab Sample ID: 400-137064-C-1-C MS ^5
Matrix: Water
Analysis Batch: 353042

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 352816

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0563		mg/L		113	75 - 125
Arsenic	0.00046	J	0.0500	0.0512		mg/L		102	75 - 125
Barium	0.020		0.0500	0.0680		mg/L		96	75 - 125
Beryllium	<0.00034		0.0500	0.0509		mg/L		102	75 - 125
Boron	<0.021		0.100	0.0966		mg/L		97	75 - 125
Cadmium	<0.00034		0.0500	0.0506		mg/L		101	75 - 125
Calcium	1.4		5.00	6.24		mg/L		96	75 - 125
Chromium	<0.0011		0.0500	0.0491		mg/L		98	75 - 125
Cobalt	0.0016	J	0.0500	0.0513		mg/L		99	75 - 125
Lead	<0.00035		0.0500	0.0509		mg/L		102	75 - 125
Lithium	<0.0032		0.0500	0.0428		mg/L		86	75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-137061-1
SDG: Ash Pond

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

Lab Sample ID: 400-137064-C-1-C MS ^5
Matrix: Water
Analysis Batch: 353042

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 352816

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	0.0035	J	0.100	0.102		mg/L		99	75 - 125
Selenium	0.0021		0.0500	0.0538		mg/L		103	75 - 125
Thallium	<0.000085		0.0100	0.00997		mg/L		100	75 - 125

Lab Sample ID: 400-137064-C-1-D MSD ^5
Matrix: Water
Analysis Batch: 353042

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 352816

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0556		mg/L		111	75 - 125	1	20
Arsenic	0.00046	J	0.0500	0.0511		mg/L		101	75 - 125	0	20
Barium	0.020		0.0500	0.0691		mg/L		98	75 - 125	2	20
Beryllium	<0.00034		0.0500	0.0509		mg/L		102	75 - 125	0	20
Boron	<0.021		0.100	0.102		mg/L		102	75 - 125	6	20
Cadmium	<0.00034		0.0500	0.0501		mg/L		100	75 - 125	1	20
Calcium	1.4		5.00	6.22		mg/L		96	75 - 125	0	20
Chromium	<0.0011		0.0500	0.0497		mg/L		99	75 - 125	1	20
Cobalt	0.0016	J	0.0500	0.0512		mg/L		99	75 - 125	0	20
Lead	<0.00035		0.0500	0.0510		mg/L		102	75 - 125	0	20
Lithium	<0.0032		0.0500	0.0426		mg/L		85	75 - 125	0	20
Molybdenum	0.0035	J	0.100	0.100		mg/L		97	75 - 125	2	20
Selenium	0.0021		0.0500	0.0526		mg/L		101	75 - 125	2	20
Thallium	<0.000085		0.0100	0.0102		mg/L		102	75 - 125	2	20

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	%Rec. Limits
Mercury	0.00101	0.00102		mg/L		101	80 - 120

Lab Sample ID: 400-137162-B-1-B MS
Matrix: Water
Analysis Batch: 352802

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 352392

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.000070		0.00201	0.00200		mg/L		99	80 - 120

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-137061-1
SDG: Ash Pond

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 400-137162-B-1-C MSD
Matrix: Water
Analysis Batch: 352802

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 352392

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.000070		0.00201	0.00200		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	%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	RPD Limit
Total Dissolved Solids	62		62.0		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: 400-137064-B-2 DU
Matrix: Water
Analysis Batch: 351822

Client Sample ID: Duplicate
Prep Type: Total/NA

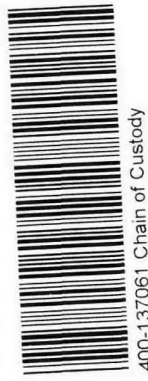
Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	62		62.0		mg/L		0	5

Chain of Custody Record

Sampler: C. Hurdle ☐; M. Thomas ☒
 Lab PM: Whitmire, Cheyenne R
 Client Contact: Lauren Petty
 E-Mail: cheyenne.whitmire@testamericainc.co
 Company: Southern Company
 Address: 42 Inverness Center Parkway
 City: Birmingham
 State, Zip: AL, 35242
 Phone: 205-992-5417
 Email: lmpetty@southernco.com
 Project Name: Plant McIntosh - Ash Pond
 Site: CCR

Carrier Tracking No(s):
 Due Date Requested:
 TAT Requested (days):
 PO #:
 WO #:
 Project #:
 SSOW#: CCR

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Oil, BT, Tissue, A=As)	Field Filtered Sample (Yes or No)		Form 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	MS/MSD	Field Filtered	MS/MSD	I	D			
MGWC-12-20170425	4/25/17	12:25	G	GW					X	X	X	3	
DUP-1	4/25/17	-	G	GW					X	X	X	3	



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 _____ Month

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: _____ Date/Time: 4-26-17 1004 Company: *FEEM*
 Relinquished by: _____ Date/Time: 4/27/17 0915 Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____
 Custody Seals Intact: Custody Seal No.: 400-137061
 Δ Yes Δ No Cooler Temperature(s) °C and Other Remarks: 7.1/3.9 (3.9/2.7) 0.0 IR 7



Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-137061-1

SDG Number: Ash Pond

Login Number: 137061

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR-7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Accreditation/Certification Summary

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

TestAmerica Job ID: 400-137061-1
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

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: 400-136772-2

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR - Plant McIntosh

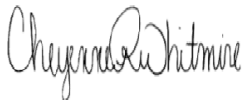
For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

5/23/2017 5:10:38 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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

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

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

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Method Summary

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

TestAmerica Job ID: 400-136772-2
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 McIntosh

TestAmerica Job ID: 400-136772-2
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-136772-1	MGWA-11	Water	04/18/17 09:40	04/20/17 09:43
400-136772-2	MGWA-10	Water	04/18/17 10:10	04/20/17 09:43
400-136772-3	MGWA-6	Water	04/18/17 11:30	04/20/17 09:43
400-136772-4	MGWA-5	Water	04/18/17 11:30	04/20/17 09:43
400-136772-5	MGWC-7	Water	04/18/17 13:15	04/20/17 09:43
400-136772-6	MGWC-8	Water	04/18/17 13:45	04/20/17 09:43
400-136772-7	MGWC-3	Water	04/18/17 14:30	04/20/17 09:43
400-136772-8	MGWC-1	Water	04/18/17 15:15	04/20/17 09:43
400-136772-9	FB-1	Water	04/18/17 15:05	04/20/17 09:43
400-136772-10	FERB-1	Water	04/18/17 15:45	04/20/17 09:43
400-136772-11	MGWC-2	Water	04/19/17 09:55	04/25/17 08:47

Client Sample Results

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

TestAmerica Job ID: 400-136772-2
SDG: Ash Pond

Client Sample ID: MGWA-11

Date Collected: 04/18/17 09:40

Date Received: 04/20/17 09:43

Lab Sample ID: 400-136772-1

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	0.191		0.0913	0.0929	1.00	0.100	pCi/L	04/26/17 08:13	05/18/17 06:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					04/26/17 08:13	05/18/17 06:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0420	U	0.257	0.257	1.00	0.449	pCi/L	04/26/17 08:54	05/11/17 14:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.4		40 - 110					04/26/17 08:54	05/11/17 14:44	1
Y Carrier	83.7		40 - 110					04/26/17 08:54	05/11/17 14:44	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.233	U	0.273	0.274	5.00	0.449	pCi/L		05/18/17 16:52	1

Client Sample Results

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

TestAmerica Job ID: 400-136772-2
 SDG: Ash Pond

Client Sample ID: MGWA-10
Date Collected: 04/18/17 10:10
Date Received: 04/20/17 09:43

Lab Sample ID: 400-136772-2
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	0.315		0.115	0.118	1.00	0.118	pCi/L	04/26/17 08:13	05/18/17 06:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					04/26/17 08:13	05/18/17 06:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.320	U	0.211	0.213	1.00	0.323	pCi/L	04/26/17 08:54	05/11/17 14:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					04/26/17 08:54	05/11/17 14:44	1
Y Carrier	83.4		40 - 110					04/26/17 08:54	05/11/17 14:44	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.635		0.240	0.244	5.00	0.323	pCi/L		05/18/17 16:52	1

Client Sample Results

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

TestAmerica Job ID: 400-136772-2
SDG: Ash Pond

Client Sample ID: MGWA-6

Lab Sample ID: 400-136772-3

Date Collected: 04/18/17 11:30

Matrix: Water

Date Received: 04/20/17 09:43

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		0.112	0.115	1.00	0.122	pCi/L	04/26/17 08:13	05/18/17 06:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					04/26/17 08:13	05/18/17 06:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0421	U	0.236	0.236	1.00	0.414	pCi/L	04/26/17 08:54	05/11/17 14:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					04/26/17 08:54	05/11/17 14:44	1
Y Carrier	82.6		40 - 110					04/26/17 08:54	05/11/17 14:44	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.316	U	0.261	0.262	5.00	0.414	pCi/L		05/18/17 16:52	1

Client Sample Results

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

TestAmerica Job ID: 400-136772-2
 SDG: Ash Pond

Client Sample ID: MGWA-5

Lab Sample ID: 400-136772-4

Date Collected: 04/18/17 11:30

Matrix: Water

Date Received: 04/20/17 09:43

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.138		0.0851	0.0860	1.00	0.112	pCi/L	04/26/17 08:13	05/18/17 06:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					04/26/17 08:13	05/18/17 06:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.141	U	0.228	0.229	1.00	0.385	pCi/L	04/26/17 08:54	05/11/17 14:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					04/26/17 08:54	05/11/17 14:44	1
Y Carrier	83.0		40 - 110					04/26/17 08:54	05/11/17 14:44	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.279	U	0.244	0.244	5.00	0.385	pCi/L		05/18/17 16:52	1

Client Sample Results

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

TestAmerica Job ID: 400-136772-2
 SDG: Ash Pond

Client Sample ID: MGWC-7

Lab Sample ID: 400-136772-5

Date Collected: 04/18/17 13:15

Matrix: Water

Date Received: 04/20/17 09:43

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		0.127	0.134	1.00	0.0937	pCi/L	04/26/17 08:13	05/18/17 06:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					04/26/17 08:13	05/18/17 06:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.216	U	0.228	0.229	1.00	0.373	pCi/L	04/26/17 08:54	05/11/17 14:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					04/26/17 08:54	05/11/17 14:44	1
Y Carrier	83.4		40 - 110					04/26/17 08:54	05/11/17 14:44	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.684		0.261	0.266	5.00	0.373	pCi/L		05/18/17 16:52	1

Client Sample Results

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

TestAmerica Job ID: 400-136772-2
 SDG: Ash Pond

Client Sample ID: MGWC-8

Lab Sample ID: 400-136772-6

Date Collected: 04/18/17 13:45

Matrix: Water

Date Received: 04/20/17 09:43

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.16		0.197	0.223	1.00	0.105	pCi/L	04/26/17 08:13	05/18/17 06:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					04/26/17 08:13	05/18/17 06:15	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.672		0.276	0.283	1.00	0.389	pCi/L	04/26/17 08:54	05/11/17 14:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					04/26/17 08:54	05/11/17 14:44	1
Y Carrier	85.2		40 - 110					04/26/17 08:54	05/11/17 14:44	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.83		0.339	0.360	5.00	0.389	pCi/L		05/18/17 16:52	1

Client Sample Results

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

TestAmerica Job ID: 400-136772-2
SDG: Ash Pond

Client Sample ID: MGWC-3

Lab Sample ID: 400-136772-7

Date Collected: 04/18/17 14:30

Matrix: Water

Date Received: 04/20/17 09:43

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.07		0.185	0.208	1.00	0.0993	pCi/L	04/26/17 08:13	05/18/17 06:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					04/26/17 08:13	05/18/17 06:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.358	U	0.283	0.285	1.00	0.452	pCi/L	04/26/17 08:54	05/11/17 14:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					04/26/17 08:54	05/11/17 14:44	1
Y Carrier	87.1		40 - 110					04/26/17 08:54	05/11/17 14:44	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.42		0.338	0.353	5.00	0.452	pCi/L		05/18/17 16:52	1

Client Sample Results

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

TestAmerica Job ID: 400-136772-2
 SDG: Ash Pond

Client Sample ID: MGWC-1
Date Collected: 04/18/17 15:15
Date Received: 04/20/17 09:43

Lab Sample ID: 400-136772-8
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	0.854		0.167	0.184	1.00	0.100	pCi/L	04/26/17 08:13	05/18/17 06:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					04/26/17 08:13	05/18/17 06:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.378	U	0.252	0.255	1.00	0.392	pCi/L	04/26/17 08:54	05/11/17 14:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					04/26/17 08:54	05/11/17 14:44	1
Y Carrier	84.5		40 - 110					04/26/17 08:54	05/11/17 14:44	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.23		0.303	0.314	5.00	0.392	pCi/L		05/18/17 16:52	1

Client Sample Results

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

TestAmerica Job ID: 400-136772-2
 SDG: Ash Pond

Client Sample ID: FB-1
Date Collected: 04/18/17 15:05
Date Received: 04/20/17 09:43

Lab Sample ID: 400-136772-9
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	0.0170	U	0.0585	0.0585	1.00	0.112	pCi/L	04/26/17 08:13	05/18/17 06:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		40 - 110					04/26/17 08:13	05/18/17 06:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0670	U	0.211	0.211	1.00	0.390	pCi/L	04/26/17 08:54	05/11/17 14:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		40 - 110					04/26/17 08:54	05/11/17 14:44	1
Y Carrier	86.0		40 - 110					04/26/17 08:54	05/11/17 14:44	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0500	U	0.219	0.219	5.00	0.390	pCi/L		05/18/17 16:52	1

Client Sample Results

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

TestAmerica Job ID: 400-136772-2
 SDG: Ash Pond

Client Sample ID: FERB-1

Date Collected: 04/18/17 15:45

Date Received: 04/20/17 09:43

Lab Sample ID: 400-136772-10

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	0.0559	U	0.0556	0.0559	1.00	0.0844	pCi/L	04/26/17 08:13	05/18/17 06:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					04/26/17 08:13	05/18/17 06:16	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.00413	U	0.206	0.206	1.00	0.370	pCi/L	04/26/17 08:54	05/11/17 14:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					04/26/17 08:54	05/11/17 14:45	1
Y Carrier	83.4		40 - 110					04/26/17 08:54	05/11/17 14:45	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0600	U	0.214	0.214	5.00	0.370	pCi/L		05/18/17 16:52	1

Client Sample Results

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

TestAmerica Job ID: 400-136772-2
SDG: Ash Pond

Client Sample ID: MGWC-2

Lab Sample ID: 400-136772-11

Date Collected: 04/19/17 09:55

Matrix: Water

Date Received: 04/25/17 08:47

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.219		0.115	0.117	1.00	0.140	pCi/L	04/26/17 08:13	05/18/17 06:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					04/26/17 08:13	05/18/17 06:17	1

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	0.313	0.315	1.00	0.499	pCi/L	04/26/17 08:54	05/11/17 14:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					04/26/17 08:54	05/11/17 14:45	1
Y Carrier	92.0		40 - 110					04/26/17 08:54	05/11/17 14:45	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.599		0.333	0.336	5.00	0.499	pCi/L		05/18/17 16:52	1

Definitions/Glossary

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

TestAmerica Job ID: 400-136772-2
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 McIntosh

TestAmerica Job ID: 400-136772-2
SDG: Ash Pond

Client Sample ID: MGWA-11

Date Collected: 04/18/17 09:40

Date Received: 04/20/17 09:43

Lab Sample ID: 400-136772-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			305643	04/26/17 08:13	MBC	TAL SL
Total/NA	Analysis	9315		1	309197	05/18/17 06:15	RTM	TAL SL
Total/NA	Prep	PrecSep_0			305651	04/26/17 08:54	MBC	TAL SL
Total/NA	Analysis	9320		1	308225	05/11/17 14:44	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	309398	05/18/17 16:52	RTM	TAL SL

Client Sample ID: MGWA-10

Date Collected: 04/18/17 10:10

Date Received: 04/20/17 09:43

Lab Sample ID: 400-136772-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			305643	04/26/17 08:13	MBC	TAL SL
Total/NA	Analysis	9315		1	309197	05/18/17 06:15	RTM	TAL SL
Total/NA	Prep	PrecSep_0			305651	04/26/17 08:54	MBC	TAL SL
Total/NA	Analysis	9320		1	308225	05/11/17 14:44	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	309398	05/18/17 16:52	RTM	TAL SL

Client Sample ID: MGWA-6

Date Collected: 04/18/17 11:30

Date Received: 04/20/17 09:43

Lab Sample ID: 400-136772-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			305643	04/26/17 08:13	MBC	TAL SL
Total/NA	Analysis	9315		1	309197	05/18/17 06:15	RTM	TAL SL
Total/NA	Prep	PrecSep_0			305651	04/26/17 08:54	MBC	TAL SL
Total/NA	Analysis	9320		1	308225	05/11/17 14:44	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	309398	05/18/17 16:52	RTM	TAL SL

Client Sample ID: MGWA-5

Date Collected: 04/18/17 11:30

Date Received: 04/20/17 09:43

Lab Sample ID: 400-136772-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			305643	04/26/17 08:13	MBC	TAL SL
Total/NA	Analysis	9315		1	309197	05/18/17 06:15	RTM	TAL SL
Total/NA	Prep	PrecSep_0			305651	04/26/17 08:54	MBC	TAL SL
Total/NA	Analysis	9320		1	308225	05/11/17 14:44	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	309398	05/18/17 16:52	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-136772-2
SDG: Ash Pond

Client Sample ID: MGWC-7

Lab Sample ID: 400-136772-5

Date Collected: 04/18/17 13:15

Matrix: Water

Date Received: 04/20/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			305643	04/26/17 08:13	MBC	TAL SL
Total/NA	Analysis	9315		1	309197	05/18/17 06:15	RTM	TAL SL
Total/NA	Prep	PrecSep_0			305651	04/26/17 08:54	MBC	TAL SL
Total/NA	Analysis	9320		1	308225	05/11/17 14:44	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	309398	05/18/17 16:52	RTM	TAL SL

Client Sample ID: MGWC-8

Lab Sample ID: 400-136772-6

Date Collected: 04/18/17 13:45

Matrix: Water

Date Received: 04/20/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			305643	04/26/17 08:13	MBC	TAL SL
Total/NA	Analysis	9315		1	309197	05/18/17 06:15	RTM	TAL SL
Total/NA	Prep	PrecSep_0			305651	04/26/17 08:54	MBC	TAL SL
Total/NA	Analysis	9320		1	308225	05/11/17 14:44	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	309398	05/18/17 16:52	RTM	TAL SL

Client Sample ID: MGWC-3

Lab Sample ID: 400-136772-7

Date Collected: 04/18/17 14:30

Matrix: Water

Date Received: 04/20/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			305643	04/26/17 08:13	MBC	TAL SL
Total/NA	Analysis	9315		1	309197	05/18/17 06:16	RTM	TAL SL
Total/NA	Prep	PrecSep_0			305651	04/26/17 08:54	MBC	TAL SL
Total/NA	Analysis	9320		1	308225	05/11/17 14:44	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	309398	05/18/17 16:52	RTM	TAL SL

Client Sample ID: MGWC-1

Lab Sample ID: 400-136772-8

Date Collected: 04/18/17 15:15

Matrix: Water

Date Received: 04/20/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			305643	04/26/17 08:13	MBC	TAL SL
Total/NA	Analysis	9315		1	309197	05/18/17 06:16	RTM	TAL SL
Total/NA	Prep	PrecSep_0			305651	04/26/17 08:54	MBC	TAL SL
Total/NA	Analysis	9320		1	308225	05/11/17 14:44	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	309398	05/18/17 16:52	RTM	TAL SL

Lab Chronicle

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

TestAmerica Job ID: 400-136772-2
SDG: Ash Pond

Client Sample ID: FB-1

Lab Sample ID: 400-136772-9

Date Collected: 04/18/17 15:05

Matrix: Water

Date Received: 04/20/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			305643	04/26/17 08:13	MBC	TAL SL
Total/NA	Analysis	9315		1	309197	05/18/17 06:16	RTM	TAL SL
Total/NA	Prep	PrecSep_0			305651	04/26/17 08:54	MBC	TAL SL
Total/NA	Analysis	9320		1	308225	05/11/17 14:44	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	309398	05/18/17 16:52	RTM	TAL SL

Client Sample ID: FERB-1

Lab Sample ID: 400-136772-10

Date Collected: 04/18/17 15:45

Matrix: Water

Date Received: 04/20/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			305643	04/26/17 08:13	MBC	TAL SL
Total/NA	Analysis	9315		1	309197	05/18/17 06:16	RTM	TAL SL
Total/NA	Prep	PrecSep_0			305651	04/26/17 08:54	MBC	TAL SL
Total/NA	Analysis	9320		1	308225	05/11/17 14:45	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	309398	05/18/17 16:52	RTM	TAL SL

Client Sample ID: MGWC-2

Lab Sample ID: 400-136772-11

Date Collected: 04/19/17 09:55

Matrix: Water

Date Received: 04/25/17 08:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			305643	04/26/17 08:13	MBC	TAL SL
Total/NA	Analysis	9315		1	309197	05/18/17 06:17	RTM	TAL SL
Total/NA	Prep	PrecSep_0			305651	04/26/17 08:54	MBC	TAL SL
Total/NA	Analysis	9320		1	308225	05/11/17 14:45	ALD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	309398	05/18/17 16:52	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 McIntosh

TestAmerica Job ID: 400-136772-2
SDG: Ash Pond

Rad

Prep Batch: 305643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136772-1	MGWA-11	Total/NA	Water	PrecSep-21	
400-136772-2	MGWA-10	Total/NA	Water	PrecSep-21	
400-136772-3	MGWA-6	Total/NA	Water	PrecSep-21	
400-136772-4	MGWA-5	Total/NA	Water	PrecSep-21	
400-136772-5	MGWC-7	Total/NA	Water	PrecSep-21	
400-136772-6	MGWC-8	Total/NA	Water	PrecSep-21	
400-136772-7	MGWC-3	Total/NA	Water	PrecSep-21	
400-136772-8	MGWC-1	Total/NA	Water	PrecSep-21	
400-136772-9	FB-1	Total/NA	Water	PrecSep-21	
400-136772-10	FERB-1	Total/NA	Water	PrecSep-21	
400-136772-11	MGWC-2	Total/NA	Water	PrecSep-21	
MB 160-305643/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-305643/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
400-136772-11 DU	MGWC-2	Total/NA	Water	PrecSep-21	

Prep Batch: 305651

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136772-1	MGWA-11	Total/NA	Water	PrecSep_0	
400-136772-2	MGWA-10	Total/NA	Water	PrecSep_0	
400-136772-3	MGWA-6	Total/NA	Water	PrecSep_0	
400-136772-4	MGWA-5	Total/NA	Water	PrecSep_0	
400-136772-5	MGWC-7	Total/NA	Water	PrecSep_0	
400-136772-6	MGWC-8	Total/NA	Water	PrecSep_0	
400-136772-7	MGWC-3	Total/NA	Water	PrecSep_0	
400-136772-8	MGWC-1	Total/NA	Water	PrecSep_0	
400-136772-9	FB-1	Total/NA	Water	PrecSep_0	
400-136772-10	FERB-1	Total/NA	Water	PrecSep_0	
400-136772-11	MGWC-2	Total/NA	Water	PrecSep_0	
MB 160-305651/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-305651/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
400-136772-11 DU	MGWC-2	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 400-136772-2
SDG: Ash Pond

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-305643/1-A
Matrix: Water
Analysis Batch: 309197

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 305643

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.04500	U	0.0649	0.0650	1.00	0.111	pCi/L	04/26/17 08:13	05/18/17 06:15	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					04/26/17 08:13	05/18/17 06:15	1

Lab Sample ID: LCS 160-305643/2-A
Matrix: Water
Analysis Batch: 309197

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 305643

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.4	10.08		1.06	1.00	0.0875	pCi/L	89	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	104		40 - 110						

Lab Sample ID: 400-136772-11 DU
Matrix: Water
Analysis Batch: 309197

Client Sample ID: MGWC-2
Prep Type: Total/NA
Prep Batch: 305643

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.219		0.1778	U	0.151	1.00	0.222	pCi/L	0.16	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	57.8		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-305651/1-A
Matrix: Water
Analysis Batch: 308225

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 305651

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1294	U	0.207	0.207	1.00	0.350	pCi/L	04/26/17 08:54	05/11/17 14:43	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					04/26/17 08:54	05/11/17 14:43	1
Y Carrier	82.6		40 - 110					04/26/17 08:54	05/11/17 14:43	1

QC Sample Results

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

TestAmerica Job ID: 400-136772-2
 SDG: Ash Pond

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

Lab Sample ID: LCS 160-305651/2-A
Matrix: Water
Analysis Batch: 308225

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 305651

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	13.5	14.34		1.54	1.00	0.345	pCi/L	107	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	104		40 - 110
Y Carrier	82.6		40 - 110

Lab Sample ID: 400-136772-11 DU
Matrix: Water
Analysis Batch: 308225

Client Sample ID: MGWC-2
Prep Type: Total/NA
Prep Batch: 305651

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.380	U	0.4327	U	0.493	1.00	0.807	pCi/L	0.07	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	57.8		40 - 110
Y Carrier	87.9		40 - 110

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

Lab Sample ID: 400-136772-11 DU
Matrix: Water
Analysis Batch: 309398

Client Sample ID: MGWC-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Combined Radium 226 + 228	0.599		0.6105	U	0.515	5.00	0.807	pCi/L	0.01	

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: Lauren Petty
 Company: Southern Company
 Address: 42 Inverness Center Parkway
 City: Birmingham
 State, Zip: AL, 35242
 Phone: 205-992-5417
 Email: lpetty@southernco.com
 Project Name: Plant McIntosh - Ash Pond
 Site: CCR

Lab Pk: Whitfire, Cheyenne R
E-Mail: cheyenne.whitfire@testamericainc.com

Carrier Tracking No(s):

COC No.:

Page: 1 of 1
Job #:

Analysis Requested

Due Date Requested:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TDS - SM 2540C: Cl.F.904 - EPA 300	Metals - (Part 297 Appendix III & IV) EPA 8020 & EPA 7470	Radium 226 & 228 - SM-446 9315 & 9320	Total Number of Containers	Special Instructions/Note:
TAT Requested (days):							
PO #:							
WO #:							
Project #:							
SSOW#:							

Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-grab)	Preservation Code	Matrix		Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TDS - SM 2540C: Cl.F.904 - EPA 300	Metals - (Part 297 Appendix III & IV) EPA 8020 & EPA 7470	Radium 226 & 228 - SM-446 9315 & 9320	Total Number of Containers	Special Instructions/Note:
					Inorganic	Organic							
MGWA-11	4/18/17	09:40	G	GW			X	X	X	X	X	3	
MGWA-10	4/18/17	10:10	G	GW			X	X	X	X	X	3	
MGWA-6	4/18/17	11:30	G	GW			X	X	X	X	X	3	
MGWA-5	4/18/17	11:30	G	GW			X	X	X	X	X	3	
MGWC-7	4/18/17	13:15	G	GW			X	X	X	X	X	3	
MGWC-8	4/18/17	13:45	G	GW			X	X	X	X	X	3	
MGWC-3	4/18/17	14:30	G	GW			X	X	X	X	X	3	
MGWC-1	4/18/17	15:15	G	GW			X	X	X	X	X	3	
FB-1	4/18/17	15:05	G	GW			X	X	X	X	X	3	
FERB-1	4/18/17	15:45	G	GW			X	X	X	X	X	3	



400-136772 Chain of Custody

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Radiochemical
 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 _____ Month

Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____

Relinquished by: _____ Date/Time: 4/18/17 14:40 Company: _____

Relinquished by: _____ Date/Time: 4/18/17 17:20 Company: _____

Relinquished by: _____ Date/Time: 4/20/17 09:43 Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Custody Seal No.: _____
 A Yes A No

15/05/19/0.7 1.6/0.4
 34/1.80C IN 2



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

Chain of Custody Record

TestAmerica
 THE LEADERS IN INFORMATION TECHNOLOGY

Client Contact:
 Lauren Petty
 Company: Southern Company
 Address: 42 Inverness Center Parkway
 City: Birmingham
 State, Zip: AL 35242
 Phone: 205-992-5417
 Email: lauren.petty@southern.com
 Project Name: Plant McIntosh - Ash Pond
 Site: CCR

Lab P#: Whitlire, Cheyenne R
 E-Mail: cheyenne.whitlire@testamerica.com

Carrier Tracking No(s):
 Page: 1 of 1
 Job #: 400-136772

COG No:
 Preservation Codes:
 A - HCL
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - NaHSO4
 F - MeOH
 G - Ammonia
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 Other:
 M - Hexane
 N - None
 O - Acetic Acid
 P - Na2SO4
 Q - Na2S2O3
 R - Na2S2O8
 S - H2SO4
 T - TSP
 U - Deionized Water
 V - Acetone
 W - MCAA
 X - ph 4.5
 Z - other (specify)

Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp G-grab)	Preservation Code	Field Filtered Sample (Yes or No)	Analysis Requested		Total Number of Containers	Special Instructions/Notes
						Health - Part 257 Appendix H & M EPA 8020 & EPA 7470	Radium 226 & 228 - 9W-866 9315 & 9320		
MGWC-2	4/18/17	8:55	G	GW					
MGWC-12	4/18/17	10:15	G	GW					extra volume for radium analysis

Possible Hazard Identification:
 Non-Hazard
 Flammable
 Skin Irritant
 Deliverable Requested: I, II, III, IV, Other (specify) _____
 Empty Kit Relinquished by: _____
 Relinquished by: _____
 Relinquished by: _____
 Relinquished by: _____
 Custody Seals Intact: Yes No
 Date: 4/18/17 15:16
 Date/Time: 4/18/17 15:16
 Date/Time: 4/25/2017 8:47
 Date/Time: _____
 Method of Shipment: _____
 Company: TA
 Company: TA
 Company: TA
 Company: TA
 Cooler Temperature (°C) and Other Remarks: 0.0°C 1P-2

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Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-136772-2

SDG Number: Ash Pond

Login Number: 136772

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.4°C, 1.8°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.	False	MGWC-12 cancelled for resampling.
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 McIntosh

TestAmerica Job ID: 400-136772-2
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 McIntosh

TestAmerica Job ID: 400-136772-2
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: 400-136772-1

TestAmerica Sample Delivery Group: Ash Pond

Client Project/Site: CCR - Plant McIntosh


For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

5/12/2017 4:50:35 PM

Cheyenne Whitmire, Project Manager II

(850)471-6222

cheyenne.whitmire@testamericainc.com

LINKS

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www.testamericainc.com

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

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

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

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Case Narrative

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Job ID: 400-136772-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-136772-1

HPLC/IC

Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MGWC-7 (400-136772-5), MGWC-8 (400-136772-6), MGWC-3 (400-136772-7), MGWC-1 (400-136772-8) and MGWC-2 (400-136772-11). Elevated reporting limits (RLs) are provided.

Metals

Method(s) 6020: The native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with preparation batch 352224 and analytical batch 352727 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of Boron in the MS/MSD was above the instrument calibration range. The data have been reported and qualified.

Method(s) 6020: The post digestion spike % recovery for Boron associated with batch 352727 was outside of control limits.

Method(s) 6020: The serial dilution performed for the following sample associated with batch 352727 was outside control limits: (400-136772-C-6-B SD)

Method(s) 6020: The following samples were diluted to bring the concentration of target analytes within the calibration range: MGWC-8 (400-136772-6) and MGWC-2 (400-136772-11). Elevated reporting limits (RLs) are provided.

Detection Summary

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Client Sample ID: MGWA-11

Lab Sample ID: 400-136772-1

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	0.11	J	0.20	0.082	mg/L	1		300.0	Total/NA
Arsenic	0.00071	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.10		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	33		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.016		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	160		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWA-10

Lab Sample ID: 400-136772-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.8		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	0.024		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Calcium	5.0		0.25	0.13	mg/L	5		6020	Total Recoverable
Chromium	0.0031		0.0025	0.0011	mg/L	5		6020	Total Recoverable
Lithium	0.0060		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	16		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWA-6

Lab Sample ID: 400-136772-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.9		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	14		1.0	0.70	mg/L	1		300.0	Total/NA
Arsenic	0.018		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.042		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	0.14		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	110		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00044	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	290		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWA-5

Lab Sample ID: 400-136772-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.3		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	5.1		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	27		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 McIntosh

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Client Sample ID: MGWA-5 (Continued)

Lab Sample ID: 400-136772-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.0080		0.0050	0.0032	mg/L	5		6020	Total
Total Dissolved Solids	140		5.0	3.4	mg/L	1		SM 2540C	Recoverable Total/NA

Client Sample ID: MGWC-7

Lab Sample ID: 400-136772-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12		1.0	0.89	mg/L	1		300.0	Total/NA
Fluoride	0.29		0.20	0.082	mg/L	1		300.0	Total/NA
Sulfate	160		10	7.0	mg/L	10		300.0	Total/NA
Arsenic	0.00050	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.011		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.5		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	56		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0086		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.11		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	300		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-8

Lab Sample ID: 400-136772-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	180		10	7.0	mg/L	10		300.0	Total/NA
Arsenic	0.00059	J	0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.040		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Beryllium	0.00067	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cadmium	0.00044	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Calcium	59		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.0050		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.023		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0037	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Selenium	0.0024		0.0013	0.00024	mg/L	5		6020	Total Recoverable
Thallium	0.00019	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Boron - DL	2.4		0.25	0.11	mg/L	25		6020	Total Recoverable
Mercury	0.00018	J	0.00020	0.000070	mg/L	1		7470A	Total/NA
Total Dissolved Solids	310		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 McIntosh

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Client Sample ID: MGWC-3

Lab Sample ID: 400-136772-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	91		5.0	3.5	mg/L	5		300.0	Total/NA
Arsenic	0.0018		0.0013	0.00046	mg/L	5		6020	Total Recoverable
Barium	0.14		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.8		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	120		0.25	0.13	mg/L	5		6020	Total Recoverable
Cobalt	0.00057	J	0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.010		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	360		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MGWC-1

Lab Sample ID: 400-136772-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		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	120		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	0.092		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Boron	1.1		0.050	0.021	mg/L	5		6020	Total Recoverable
Calcium	100		0.25	0.13	mg/L	5		6020	Total Recoverable
Lithium	0.0097		0.0050	0.0032	mg/L	5		6020	Total Recoverable
Molybdenum	0.0013	J	0.015	0.00085	mg/L	5		6020	Total Recoverable
Thallium	0.000095	J	0.00050	0.000085	mg/L	5		6020	Total Recoverable
Total Dissolved Solids	360		5.0	3.4	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FB-1

Lab Sample ID: 400-136772-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.023	J	0.050	0.021	mg/L	5		6020	Total Recoverable

Client Sample ID: FERB-1

Lab Sample ID: 400-136772-10

No Detections.

Client Sample ID: MGWC-2

Lab Sample ID: 400-136772-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	17		1.0	0.89	mg/L	1		300.0	Total/NA
Sulfate	250		10	7.0	mg/L	10		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Detection Summary

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

TestAmerica Job ID: 400-136772-1
 SDG: Ash Pond

Client Sample ID: MGWC-2 (Continued)

Lab Sample ID: 400-136772-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.051		0.0025	0.00049	mg/L	5		6020	Total Recoverable
Cadmium	0.0011	J	0.0025	0.00034	mg/L	5		6020	Total Recoverable
Cobalt	0.0035		0.0025	0.00040	mg/L	5		6020	Total Recoverable
Lithium	0.0042	J	0.0050	0.0032	mg/L	5		6020	Total Recoverable
Boron - DL	3.7		0.25	0.11	mg/L	25		6020	Total Recoverable
Calcium - DL	120		1.3	0.63	mg/L	25		6020	Total Recoverable
Total Dissolved Solids	600		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 McIntosh

TestAmerica Job ID: 400-136772-1
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 McIntosh

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-136772-1	MGWA-11	Water	04/18/17 09:40	04/20/17 09:43
400-136772-2	MGWA-10	Water	04/18/17 10:10	04/20/17 09:43
400-136772-3	MGWA-6	Water	04/18/17 11:30	04/20/17 09:43
400-136772-4	MGWA-5	Water	04/18/17 11:30	04/20/17 09:43
400-136772-5	MGWC-7	Water	04/18/17 13:15	04/20/17 09:43
400-136772-6	MGWC-8	Water	04/18/17 13:45	04/20/17 09:43
400-136772-7	MGWC-3	Water	04/18/17 14:30	04/20/17 09:43
400-136772-8	MGWC-1	Water	04/18/17 15:15	04/20/17 09:43
400-136772-9	FB-1	Water	04/18/17 15:05	04/20/17 09:43
400-136772-10	FERB-1	Water	04/18/17 15:45	04/20/17 09:43
400-136772-11	MGWC-2	Water	04/19/17 09:55	04/25/17 08:47

Client Sample Results

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

TestAmerica Job ID: 400-136772-1
 SDG: Ash Pond

Client Sample ID: MGWA-11

Date Collected: 04/18/17 09:40

Date Received: 04/20/17 09:43

Lab Sample ID: 400-136772-1

Matrix: Water

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			04/23/17 06:17	1
Fluoride	0.11	J	0.20	0.082	mg/L			04/23/17 06:17	1
Sulfate	<0.70		1.0	0.70	mg/L			04/23/17 06:17	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		05/03/17 10:44	05/03/17 19:09	5
Arsenic	0.00071	J	0.0013	0.00046	mg/L		05/03/17 10:44	05/03/17 19:09	5
Barium	0.10		0.0025	0.00049	mg/L		05/03/17 10:44	05/03/17 19:09	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/03/17 10:44	05/03/17 19:09	5
Boron	<0.021		0.050	0.021	mg/L		05/03/17 10:44	05/03/17 19:09	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/03/17 10:44	05/03/17 19:09	5
Calcium	33		0.25	0.13	mg/L		05/03/17 10:44	05/03/17 19:09	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/03/17 10:44	05/03/17 19:09	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/03/17 10:44	05/03/17 19:09	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/03/17 10:44	05/03/17 19:09	5
Lithium	0.016		0.0050	0.0032	mg/L		05/03/17 10:44	05/03/17 19:09	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/03/17 10:44	05/03/17 19:09	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/03/17 10:44	05/03/17 19:09	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/03/17 10:44	05/03/17 19:09	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/29/17 13:34	05/02/17 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	160		5.0	3.4	mg/L			04/22/17 13:24	1

Client Sample Results

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Client Sample ID: MGWA-10

Date Collected: 04/18/17 10:10

Date Received: 04/20/17 09:43

Lab Sample ID: 400-136772-2

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.8		1.0	0.89	mg/L			04/23/17 07:26	1
Fluoride	<0.082		0.20	0.082	mg/L			04/23/17 07:26	1
Sulfate	1.3		1.0	0.70	mg/L			04/23/17 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		05/03/17 10:44	05/03/17 19:14	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/03/17 10:44	05/03/17 19:14	5
Barium	0.024		0.0025	0.00049	mg/L		05/03/17 10:44	05/03/17 19:14	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/03/17 10:44	05/03/17 19:14	5
Boron	<0.021		0.050	0.021	mg/L		05/03/17 10:44	05/03/17 19:14	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/03/17 10:44	05/03/17 19:14	5
Calcium	5.0		0.25	0.13	mg/L		05/03/17 10:44	05/03/17 19:14	5
Chromium	0.0031		0.0025	0.0011	mg/L		05/03/17 10:44	05/03/17 19:14	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/03/17 10:44	05/03/17 19:14	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/03/17 10:44	05/03/17 19:14	5
Lithium	0.0060		0.0050	0.0032	mg/L		05/03/17 10:44	05/03/17 19:14	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/03/17 10:44	05/03/17 19:14	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/03/17 10:44	05/03/17 19:14	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/03/17 10:44	05/03/17 19:14	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/29/17 13:34	05/02/17 15:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	16		5.0	3.4	mg/L			04/22/17 13:24	1

Client Sample Results

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Client Sample ID: MGWA-6

Lab Sample ID: 400-136772-3

Date Collected: 04/18/17 11:30

Matrix: Water

Date Received: 04/20/17 09:43

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.9		1.0	0.89	mg/L			04/23/17 07:49	1
Fluoride	<0.082		0.20	0.082	mg/L			04/23/17 07:49	1
Sulfate	14		1.0	0.70	mg/L			04/23/17 07:49	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		05/03/17 10:44	05/03/17 19:37	5
Arsenic	0.018		0.0013	0.00046	mg/L		05/03/17 10:44	05/03/17 19:37	5
Barium	0.042		0.0025	0.00049	mg/L		05/03/17 10:44	05/03/17 19:37	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/03/17 10:44	05/03/17 19:37	5
Boron	0.14		0.050	0.021	mg/L		05/03/17 10:44	05/03/17 19:37	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/03/17 10:44	05/03/17 19:37	5
Calcium	110		0.25	0.13	mg/L		05/03/17 10:44	05/03/17 19:37	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/03/17 10:44	05/03/17 19:37	5
Cobalt	0.00044	J	0.0025	0.00040	mg/L		05/03/17 10:44	05/03/17 19:37	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/03/17 10:44	05/03/17 19:37	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/03/17 10:44	05/03/17 19:37	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/03/17 10:44	05/03/17 19:37	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/03/17 10:44	05/03/17 19:37	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/03/17 10:44	05/03/17 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		04/29/17 13:34	05/02/17 15:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	290		5.0	3.4	mg/L			04/22/17 13:24	1

Client Sample Results

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Client Sample ID: MGWA-5

Date Collected: 04/18/17 11:30

Date Received: 04/20/17 09:43

Lab Sample ID: 400-136772-4

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.3		1.0	0.89	mg/L			04/23/17 08:12	1
Fluoride	<0.082		0.20	0.082	mg/L			04/23/17 08:12	1
Sulfate	5.1		1.0	0.70	mg/L			04/23/17 08:12	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		05/03/17 10:44	05/03/17 19:41	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/03/17 10:44	05/03/17 19:41	5
Barium	0.035		0.0025	0.00049	mg/L		05/03/17 10:44	05/03/17 19:41	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/03/17 10:44	05/03/17 19:41	5
Boron	<0.021		0.050	0.021	mg/L		05/03/17 10:44	05/03/17 19:41	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/03/17 10:44	05/03/17 19:41	5
Calcium	27		0.25	0.13	mg/L		05/03/17 10:44	05/03/17 19:41	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/03/17 10:44	05/03/17 19:41	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/03/17 10:44	05/03/17 19:41	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/03/17 10:44	05/03/17 19:41	5
Lithium	0.0080		0.0050	0.0032	mg/L		05/03/17 10:44	05/03/17 19:41	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/03/17 10:44	05/03/17 19:41	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/03/17 10:44	05/03/17 19:41	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/03/17 10:44	05/03/17 19:41	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		04/29/17 13:34	05/02/17 15:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	140		5.0	3.4	mg/L			04/22/17 13:24	1

Client Sample Results

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Client Sample ID: MGWC-7

Date Collected: 04/18/17 13:15

Date Received: 04/20/17 09:43

Lab Sample ID: 400-136772-5

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12		1.0	0.89	mg/L			04/23/17 08:34	1
Fluoride	0.29		0.20	0.082	mg/L			04/23/17 08:34	1
Sulfate	160		10	7.0	mg/L			04/23/17 17:28	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		05/03/17 10:44	05/03/17 19:46	5
Arsenic	0.00050	J	0.0013	0.00046	mg/L		05/03/17 10:44	05/03/17 19:46	5
Barium	0.011		0.0025	0.00049	mg/L		05/03/17 10:44	05/03/17 19:46	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/03/17 10:44	05/03/17 19:46	5
Boron	1.5		0.050	0.021	mg/L		05/03/17 10:44	05/03/17 19:46	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/03/17 10:44	05/03/17 19:46	5
Calcium	56		0.25	0.13	mg/L		05/03/17 10:44	05/03/17 19:46	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/03/17 10:44	05/03/17 19:46	5
Cobalt	0.0086		0.0025	0.00040	mg/L		05/03/17 10:44	05/03/17 19:46	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/03/17 10:44	05/03/17 19:46	5
Lithium	0.11		0.0050	0.0032	mg/L		05/03/17 10:44	05/03/17 19:46	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/03/17 10:44	05/03/17 19:46	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/03/17 10:44	05/03/17 19:46	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/03/17 10:44	05/03/17 19:46	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		04/29/17 13:34	05/02/17 15:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	300		5.0	3.4	mg/L			04/22/17 13:24	1

Client Sample Results

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Client Sample ID: MGWC-8

Lab Sample ID: 400-136772-6

Date Collected: 04/18/17 13:45

Matrix: Water

Date Received: 04/20/17 09:43

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10		1.0	0.89	mg/L			04/23/17 08:57	1
Fluoride	<0.082		0.20	0.082	mg/L			04/23/17 08:57	1
Sulfate	180		10	7.0	mg/L			04/23/17 17:51	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		05/03/17 16:30	05/05/17 17:40	5
Arsenic	0.00059	J	0.0013	0.00046	mg/L		05/03/17 16:30	05/05/17 17:40	5
Barium	0.040		0.0025	0.00049	mg/L		05/03/17 16:30	05/05/17 17:40	5
Beryllium	0.00067	J	0.0025	0.00034	mg/L		05/03/17 16:30	05/05/17 17:40	5
Cadmium	0.00044	J	0.0025	0.00034	mg/L		05/03/17 16:30	05/05/17 17:40	5
Calcium	59		0.25	0.13	mg/L		05/03/17 16:30	05/05/17 17:40	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/03/17 16:30	05/05/17 17:40	5
Cobalt	0.0050		0.0025	0.00040	mg/L		05/03/17 16:30	05/05/17 17:40	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/03/17 16:30	05/05/17 17:40	5
Lithium	0.023		0.0050	0.0032	mg/L		05/03/17 16:30	05/05/17 17:40	5
Molybdenum	0.0037	J	0.015	0.00085	mg/L		05/03/17 16:30	05/05/17 17:40	5
Selenium	0.0024		0.0013	0.00024	mg/L		05/03/17 16:30	05/05/17 17:40	5
Thallium	0.00019	J	0.00050	0.000085	mg/L		05/03/17 16:30	05/05/17 17:40	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.4		0.25	0.11	mg/L		05/03/17 16:30	05/08/17 11:47	25

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00018	J	0.00020	0.000070	mg/L		04/29/17 13:34	05/02/17 15:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	310		5.0	3.4	mg/L			04/22/17 13:24	1

Client Sample Results

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Client Sample ID: MGWC-3

Lab Sample ID: 400-136772-7

Date Collected: 04/18/17 14:30

Matrix: Water

Date Received: 04/20/17 09:43

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		1.0	0.89	mg/L			04/23/17 09:20	1
Fluoride	<0.082		0.20	0.082	mg/L			04/23/17 09:20	1
Sulfate	91		5.0	3.5	mg/L			04/23/17 18:14	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		05/03/17 16:30	05/05/17 18:20	5
Arsenic	0.0018		0.0013	0.00046	mg/L		05/03/17 16:30	05/05/17 18:20	5
Barium	0.14		0.0025	0.00049	mg/L		05/03/17 16:30	05/05/17 18:20	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/03/17 16:30	05/05/17 18:20	5
Boron	1.8		0.050	0.021	mg/L		05/03/17 16:30	05/05/17 18:20	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/03/17 16:30	05/05/17 18:20	5
Calcium	120		0.25	0.13	mg/L		05/03/17 16:30	05/05/17 18:20	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/03/17 16:30	05/05/17 18:20	5
Cobalt	0.00057	J	0.0025	0.00040	mg/L		05/03/17 16:30	05/05/17 18:20	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/03/17 16:30	05/05/17 18:20	5
Lithium	0.010		0.0050	0.0032	mg/L		05/03/17 16:30	05/05/17 18:20	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/03/17 16:30	05/05/17 18:20	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/03/17 16:30	05/05/17 18:20	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/03/17 16:30	05/05/17 18:20	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		04/29/17 13:34	05/02/17 15:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	360		5.0	3.4	mg/L			04/22/17 13:24	1

Client Sample Results

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Client Sample ID: MGWC-1

Lab Sample ID: 400-136772-8

Date Collected: 04/18/17 15:15

Matrix: Water

Date Received: 04/20/17 09:43

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		1.0	0.89	mg/L			04/23/17 19:22	1
Fluoride	0.20		0.20	0.082	mg/L			04/23/17 19:22	1
Sulfate	120		5.0	3.5	mg/L			04/24/17 14:46	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		05/03/17 16:30	05/05/17 18:25	5
Arsenic	0.0024		0.0013	0.00046	mg/L		05/03/17 16:30	05/05/17 18:25	5
Barium	0.092		0.0025	0.00049	mg/L		05/03/17 16:30	05/05/17 18:25	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/03/17 16:30	05/05/17 18:25	5
Boron	1.1		0.050	0.021	mg/L		05/03/17 16:30	05/05/17 18:25	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/03/17 16:30	05/05/17 18:25	5
Calcium	100		0.25	0.13	mg/L		05/03/17 16:30	05/05/17 18:25	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/03/17 16:30	05/05/17 18:25	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/03/17 16:30	05/05/17 18:25	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/03/17 16:30	05/05/17 18:25	5
Lithium	0.0097		0.0050	0.0032	mg/L		05/03/17 16:30	05/05/17 18:25	5
Molybdenum	0.0013	J	0.015	0.00085	mg/L		05/03/17 16:30	05/05/17 18:25	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/03/17 16:30	05/05/17 18:25	5
Thallium	0.000095	J	0.00050	0.000085	mg/L		05/03/17 16:30	05/05/17 18:25	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		04/29/17 13:34	05/02/17 16:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	360		5.0	3.4	mg/L			04/22/17 13:24	1

Client Sample Results

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Client Sample ID: FB-1
Date Collected: 04/18/17 15:05
Date Received: 04/20/17 09:43

Lab Sample ID: 400-136772-9
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			04/23/17 20:08	1
Fluoride	<0.082		0.20	0.082	mg/L			04/23/17 20:08	1
Sulfate	<0.70		1.0	0.70	mg/L			04/23/17 20:08	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		05/03/17 16:30	05/05/17 18:29	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/03/17 16:30	05/05/17 18:29	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/03/17 16:30	05/05/17 18:29	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/03/17 16:30	05/05/17 18:29	5
Boron	0.023	J	0.050	0.021	mg/L		05/03/17 16:30	05/05/17 18:29	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/03/17 16:30	05/05/17 18:29	5
Calcium	<0.13		0.25	0.13	mg/L		05/03/17 16:30	05/05/17 18:29	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/03/17 16:30	05/05/17 18:29	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/03/17 16:30	05/05/17 18:29	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/03/17 16:30	05/05/17 18:29	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/03/17 16:30	05/05/17 18:29	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/03/17 16:30	05/05/17 18:29	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/03/17 16:30	05/05/17 18:29	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/03/17 16:30	05/05/17 18:29	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/29/17 13:34	05/02/17 16:02	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			04/22/17 13:24	1

Client Sample Results

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Client Sample ID: FERB-1

Date Collected: 04/18/17 15:45

Date Received: 04/20/17 09:43

Lab Sample ID: 400-136772-10

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			04/23/17 20:31	1
Fluoride	<0.082		0.20	0.082	mg/L			04/23/17 20:31	1
Sulfate	<0.70		1.0	0.70	mg/L			04/23/17 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		05/03/17 16:30	05/05/17 18:34	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/03/17 16:30	05/05/17 18:34	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/03/17 16:30	05/05/17 18:34	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/03/17 16:30	05/05/17 18:34	5
Boron	<0.021		0.050	0.021	mg/L		05/03/17 16:30	05/05/17 18:34	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/03/17 16:30	05/05/17 18:34	5
Calcium	<0.13		0.25	0.13	mg/L		05/03/17 16:30	05/05/17 18:34	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/03/17 16:30	05/05/17 18:34	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/03/17 16:30	05/05/17 18:34	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/03/17 16:30	05/05/17 18:34	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/03/17 16:30	05/05/17 18:34	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/03/17 16:30	05/05/17 18:34	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/03/17 16:30	05/05/17 18:34	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/03/17 16:30	05/05/17 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		04/29/17 13:34	05/02/17 16:03	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			04/22/17 13:24	1

Client Sample Results

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Client Sample ID: MGWC-2

Lab Sample ID: 400-136772-11

Date Collected: 04/19/17 09:55

Matrix: Water

Date Received: 04/25/17 08:47

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17		1.0	0.89	mg/L			04/26/17 22:35	1
Fluoride	<0.082		0.20	0.082	mg/L			04/26/17 22:35	1
Sulfate	250		10	7.0	mg/L			04/27/17 20:42	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		05/03/17 16:30	05/05/17 18:38	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/03/17 16:30	05/05/17 18:38	5
Barium	0.051		0.0025	0.00049	mg/L		05/03/17 16:30	05/05/17 18:38	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/03/17 16:30	05/05/17 18:38	5
Cadmium	0.0011	J	0.0025	0.00034	mg/L		05/03/17 16:30	05/05/17 18:38	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/03/17 16:30	05/05/17 18:38	5
Cobalt	0.0035		0.0025	0.00040	mg/L		05/03/17 16:30	05/05/17 18:38	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/03/17 16:30	05/05/17 18:38	5
Lithium	0.0042	J	0.0050	0.0032	mg/L		05/03/17 16:30	05/05/17 18:38	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/03/17 16:30	05/05/17 18:38	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/03/17 16:30	05/05/17 18:38	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/03/17 16:30	05/05/17 18:38	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.7		0.25	0.11	mg/L		05/03/17 16:30	05/08/17 11:52	25
Calcium	120		1.3	0.63	mg/L		05/03/17 16:30	05/08/17 11:52	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		04/29/17 13:34	05/02/17 12:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	600		5.0	3.4	mg/L			04/26/17 16:26	1

Definitions/Glossary

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

TestAmerica Job ID: 400-136772-1
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
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.

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 McIntosh

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Client Sample ID: MGWA-11

Date Collected: 04/18/17 09:40

Date Received: 04/20/17 09:43

Lab Sample ID: 400-136772-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	350909	04/23/17 06:17	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352149	05/03/17 10:44	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352271	05/03/17 19:09	DRE	TAL PEN
Total/NA	Prep	7470A			351566	04/29/17 13:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 15:35	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	350851	04/22/17 13:24	TET	TAL PEN

Client Sample ID: MGWA-10

Date Collected: 04/18/17 10:10

Date Received: 04/20/17 09:43

Lab Sample ID: 400-136772-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	350909	04/23/17 07:26	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352149	05/03/17 10:44	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352271	05/03/17 19:14	DRE	TAL PEN
Total/NA	Prep	7470A			351566	04/29/17 13:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 15:37	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	350851	04/22/17 13:24	TET	TAL PEN

Client Sample ID: MGWA-6

Date Collected: 04/18/17 11:30

Date Received: 04/20/17 09:43

Lab Sample ID: 400-136772-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	350909	04/23/17 07:49	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352149	05/03/17 10:44	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352271	05/03/17 19:37	DRE	TAL PEN
Total/NA	Prep	7470A			351566	04/29/17 13:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 15:39	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	350851	04/22/17 13:24	TET	TAL PEN

Client Sample ID: MGWA-5

Date Collected: 04/18/17 11:30

Date Received: 04/20/17 09:43

Lab Sample ID: 400-136772-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	350909	04/23/17 08:12	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352149	05/03/17 10:44	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352271	05/03/17 19:41	DRE	TAL PEN
Total/NA	Prep	7470A			351566	04/29/17 13:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 15:40	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	350851	04/22/17 13:24	TET	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Client Sample ID: MGWC-7

Lab Sample ID: 400-136772-5

Date Collected: 04/18/17 13:15

Matrix: Water

Date Received: 04/20/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	350909	04/23/17 08:34	TAJ	TAL PEN
Total/NA	Analysis	300.0		10	350914	04/23/17 17:28	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352149	05/03/17 10:44	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352271	05/03/17 19:46	DRE	TAL PEN
Total/NA	Prep	7470A			351566	04/29/17 13:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 15:42	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	350851	04/22/17 13:24	TET	TAL PEN

Client Sample ID: MGWC-8

Lab Sample ID: 400-136772-6

Date Collected: 04/18/17 13:45

Matrix: Water

Date Received: 04/20/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	350909	04/23/17 08:57	TAJ	TAL PEN
Total/NA	Analysis	300.0		10	350914	04/23/17 17:51	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352224	05/03/17 16:30	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352727	05/05/17 17:40	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		352224	05/03/17 16:30	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	352869	05/08/17 11:47	DRE	TAL PEN
Total/NA	Prep	7470A			351566	04/29/17 13:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 15:56	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	350851	04/22/17 13:24	TET	TAL PEN

Client Sample ID: MGWC-3

Lab Sample ID: 400-136772-7

Date Collected: 04/18/17 14:30

Matrix: Water

Date Received: 04/20/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	350909	04/23/17 09:20	TAJ	TAL PEN
Total/NA	Analysis	300.0		5	350914	04/23/17 18:14	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352224	05/03/17 16:30	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352727	05/05/17 18:20	DRE	TAL PEN
Total/NA	Prep	7470A			351566	04/29/17 13:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 15:58	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	350851	04/22/17 13:24	TET	TAL PEN

Client Sample ID: MGWC-1

Lab Sample ID: 400-136772-8

Date Collected: 04/18/17 15:15

Matrix: Water

Date Received: 04/20/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	350914	04/23/17 19:22	TAJ	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Client Sample ID: MGWC-1

Lab Sample ID: 400-136772-8

Date Collected: 04/18/17 15:15

Matrix: Water

Date Received: 04/20/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5	350987	04/24/17 14:46	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352224	05/03/17 16:30	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352727	05/05/17 18:25	DRE	TAL PEN
Total/NA	Prep	7470A			351566	04/29/17 13:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 16:00	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	350851	04/22/17 13:24	TET	TAL PEN

Client Sample ID: FB-1

Lab Sample ID: 400-136772-9

Date Collected: 04/18/17 15:05

Matrix: Water

Date Received: 04/20/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	350914	04/23/17 20:08	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352224	05/03/17 16:30	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352727	05/05/17 18:29	DRE	TAL PEN
Total/NA	Prep	7470A			351566	04/29/17 13:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 16:02	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	350851	04/22/17 13:24	TET	TAL PEN

Client Sample ID: FERB-1

Lab Sample ID: 400-136772-10

Date Collected: 04/18/17 15:45

Matrix: Water

Date Received: 04/20/17 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	350914	04/23/17 20:31	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352224	05/03/17 16:30	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352727	05/05/17 18:34	DRE	TAL PEN
Total/NA	Prep	7470A			351566	04/29/17 13:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 16:03	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	350851	04/22/17 13:24	TET	TAL PEN

Client Sample ID: MGWC-2

Lab Sample ID: 400-136772-11

Date Collected: 04/19/17 09:55

Matrix: Water

Date Received: 04/25/17 08:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	351445	04/26/17 22:35	TAJ	TAL PEN
Total/NA	Analysis	300.0		10	351602	04/27/17 20:42	TAJ	TAL PEN
Total Recoverable	Prep	3005A			352224	05/03/17 16:30	DRE	TAL PEN
Total Recoverable	Analysis	6020		5	352727	05/05/17 18:38	DRE	TAL PEN
Total Recoverable	Prep	3005A	DL		352224	05/03/17 16:30	DRE	TAL PEN
Total Recoverable	Analysis	6020	DL	25	352869	05/08/17 11:52	DRE	TAL PEN

TestAmerica Pensacola

Lab Chronicle

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Client Sample ID: MGWC-2

Lab Sample ID: 400-136772-11

Date Collected: 04/19/17 09:55

Matrix: Water

Date Received: 04/25/17 08:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			351677	04/29/17 13:34	DN1	TAL PEN
Total/NA	Analysis	7470A		1	352077	05/02/17 12:33	JAP	TAL PEN
Total/NA	Analysis	SM 2540C		1	351408	04/26/17 16:26	TET	TAL PEN

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 McIntosh

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

HPLC/IC

Analysis Batch: 350909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136772-1	MGWA-11	Total/NA	Water	300.0	
400-136772-2	MGWA-10	Total/NA	Water	300.0	
400-136772-3	MGWA-6	Total/NA	Water	300.0	
400-136772-4	MGWA-5	Total/NA	Water	300.0	
400-136772-5	MGWC-7	Total/NA	Water	300.0	
400-136772-6	MGWC-8	Total/NA	Water	300.0	
400-136772-7	MGWC-3	Total/NA	Water	300.0	
MB 400-350909/4	Method Blank	Total/NA	Water	300.0	
LCS 400-350909/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-350909/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-136622-C-1 MS	Matrix Spike	Total/NA	Water	300.0	
400-136622-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 350914

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136772-5	MGWC-7	Total/NA	Water	300.0	
400-136772-6	MGWC-8	Total/NA	Water	300.0	
400-136772-7	MGWC-3	Total/NA	Water	300.0	
400-136772-8	MGWC-1	Total/NA	Water	300.0	
400-136772-9	FB-1	Total/NA	Water	300.0	
400-136772-10	FERB-1	Total/NA	Water	300.0	
MB 400-350914/36	Method Blank	Total/NA	Water	300.0	
LCS 400-350914/37	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-350914/38	Lab Control Sample Dup	Total/NA	Water	300.0	
400-135632-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
400-135632-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 350987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136772-8	MGWC-1	Total/NA	Water	300.0	
MB 400-350987/4	Method Blank	Total/NA	Water	300.0	
LCS 400-350987/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-350987/6	Lab Control Sample Dup	Total/NA	Water	300.0	
400-136839-Q-4 MS	Matrix Spike	Total/NA	Water	300.0	
400-136839-Q-4 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 351445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136772-11	MGWC-2	Total/NA	Water	300.0	
MB 400-351445/14	Method Blank	Total/NA	Water	300.0	
LCS 400-351445/15	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-351445/16	Lab Control Sample Dup	Total/NA	Water	300.0	
400-137040-A-3 MS	Matrix Spike	Total/NA	Water	300.0	
400-137040-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 351602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136772-11	MGWC-2	Total/NA	Water	300.0	
MB 400-351602/4	Method Blank	Total/NA	Water	300.0	
LCS 400-351602/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 400-351602/6	Lab Control Sample Dup	Total/NA	Water	300.0	

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

HPLC/IC (Continued)

Analysis Batch: 351602 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-137112-I-6 MS	Matrix Spike	Total/NA	Water	300.0	
400-137112-I-6 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 351566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136772-1	MGWA-11	Total/NA	Water	7470A	
400-136772-2	MGWA-10	Total/NA	Water	7470A	
400-136772-3	MGWA-6	Total/NA	Water	7470A	
400-136772-4	MGWA-5	Total/NA	Water	7470A	
400-136772-5	MGWC-7	Total/NA	Water	7470A	
400-136772-6	MGWC-8	Total/NA	Water	7470A	
400-136772-7	MGWC-3	Total/NA	Water	7470A	
400-136772-8	MGWC-1	Total/NA	Water	7470A	
400-136772-9	FB-1	Total/NA	Water	7470A	
400-136772-10	FERB-1	Total/NA	Water	7470A	
MB 400-351566/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-351566/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-136659-G-1-B MS	Matrix Spike	Total/NA	Water	7470A	
400-136659-G-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Prep Batch: 351677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136772-11	MGWC-2	Total/NA	Water	7470A	
MB 400-351677/14-A	Method Blank	Total/NA	Water	7470A	
LCS 400-351677/15-A	Lab Control Sample	Total/NA	Water	7470A	
400-136473-J-4-E MS	Matrix Spike	Total/NA	Water	7470A	
400-136473-J-4-F MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 352077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136772-1	MGWA-11	Total/NA	Water	7470A	351566
400-136772-2	MGWA-10	Total/NA	Water	7470A	351566
400-136772-3	MGWA-6	Total/NA	Water	7470A	351566
400-136772-4	MGWA-5	Total/NA	Water	7470A	351566
400-136772-5	MGWC-7	Total/NA	Water	7470A	351566
400-136772-6	MGWC-8	Total/NA	Water	7470A	351566
400-136772-7	MGWC-3	Total/NA	Water	7470A	351566
400-136772-8	MGWC-1	Total/NA	Water	7470A	351566
400-136772-9	FB-1	Total/NA	Water	7470A	351566
400-136772-10	FERB-1	Total/NA	Water	7470A	351566
400-136772-11	MGWC-2	Total/NA	Water	7470A	351677
MB 400-351566/14-A	Method Blank	Total/NA	Water	7470A	351566
MB 400-351677/14-A	Method Blank	Total/NA	Water	7470A	351677
LCS 400-351566/15-A	Lab Control Sample	Total/NA	Water	7470A	351566
LCS 400-351677/15-A	Lab Control Sample	Total/NA	Water	7470A	351677
400-136473-J-4-E MS	Matrix Spike	Total/NA	Water	7470A	351677
400-136473-J-4-F MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	351677
400-136659-G-1-B MS	Matrix Spike	Total/NA	Water	7470A	351566

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Metals (Continued)

Analysis Batch: 352077 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136659-G-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	351566

Prep Batch: 352149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136772-1	MGWA-11	Total Recoverable	Water	3005A	
400-136772-2	MGWA-10	Total Recoverable	Water	3005A	
400-136772-3	MGWA-6	Total Recoverable	Water	3005A	
400-136772-4	MGWA-5	Total Recoverable	Water	3005A	
400-136772-5	MGWC-7	Total Recoverable	Water	3005A	
MB 400-352149/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-352149/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-136917-D-13-B MS ^5	Matrix Spike	Dissolved	Water	3005A	
400-136917-D-13-C MSD ^5	Matrix Spike Duplicate	Dissolved	Water	3005A	

Prep Batch: 352224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136772-6	MGWC-8	Total Recoverable	Water	3005A	
400-136772-6 - DL	MGWC-8	Total Recoverable	Water	3005A	
400-136772-7	MGWC-3	Total Recoverable	Water	3005A	
400-136772-8	MGWC-1	Total Recoverable	Water	3005A	
400-136772-9	FB-1	Total Recoverable	Water	3005A	
400-136772-10	FERB-1	Total Recoverable	Water	3005A	
400-136772-11	MGWC-2	Total Recoverable	Water	3005A	
400-136772-11 - DL	MGWC-2	Total Recoverable	Water	3005A	
MB 400-352224/1-A ^5	Method Blank	Total Recoverable	Water	3005A	
LCS 400-352224/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-136772-6 MS	MGWC-8	Total Recoverable	Water	3005A	
400-136772-6 MSD	MGWC-8	Total Recoverable	Water	3005A	

Analysis Batch: 352271

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136772-1	MGWA-11	Total Recoverable	Water	6020	352149
400-136772-2	MGWA-10	Total Recoverable	Water	6020	352149
400-136772-3	MGWA-6	Total Recoverable	Water	6020	352149
400-136772-4	MGWA-5	Total Recoverable	Water	6020	352149
400-136772-5	MGWC-7	Total Recoverable	Water	6020	352149
MB 400-352149/1-A ^5	Method Blank	Total Recoverable	Water	6020	352149
LCS 400-352149/2-A	Lab Control Sample	Total Recoverable	Water	6020	352149
400-136917-D-13-B MS ^5	Matrix Spike	Dissolved	Water	6020	352149
400-136917-D-13-C MSD ^5	Matrix Spike Duplicate	Dissolved	Water	6020	352149

Analysis Batch: 352727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136772-6	MGWC-8	Total Recoverable	Water	6020	352224
400-136772-7	MGWC-3	Total Recoverable	Water	6020	352224
400-136772-8	MGWC-1	Total Recoverable	Water	6020	352224
400-136772-9	FB-1	Total Recoverable	Water	6020	352224
400-136772-10	FERB-1	Total Recoverable	Water	6020	352224
400-136772-11	MGWC-2	Total Recoverable	Water	6020	352224
MB 400-352224/1-A ^5	Method Blank	Total Recoverable	Water	6020	352224
LCS 400-352224/2-A	Lab Control Sample	Total Recoverable	Water	6020	352224

TestAmerica Pensacola

QC Association Summary

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

TestAmerica Job ID: 400-136772-1
 SDG: Ash Pond

Metals (Continued)

Analysis Batch: 352727 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136772-6 MS	MGWC-8	Total Recoverable	Water	6020	352224
400-136772-6 MSD	MGWC-8	Total Recoverable	Water	6020	352224

Analysis Batch: 352869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136772-6 - DL	MGWC-8	Total Recoverable	Water	6020	352224
400-136772-11 - DL	MGWC-2	Total Recoverable	Water	6020	352224

General Chemistry

Analysis Batch: 350851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136772-1	MGWA-11	Total/NA	Water	SM 2540C	
400-136772-2	MGWA-10	Total/NA	Water	SM 2540C	
400-136772-3	MGWA-6	Total/NA	Water	SM 2540C	
400-136772-4	MGWA-5	Total/NA	Water	SM 2540C	
400-136772-5	MGWC-7	Total/NA	Water	SM 2540C	
400-136772-6	MGWC-8	Total/NA	Water	SM 2540C	
400-136772-7	MGWC-3	Total/NA	Water	SM 2540C	
400-136772-8	MGWC-1	Total/NA	Water	SM 2540C	
400-136772-9	FB-1	Total/NA	Water	SM 2540C	
400-136772-10	FERB-1	Total/NA	Water	SM 2540C	
MB 400-350851/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-350851/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-136772-1 DU	MGWA-11	Total/NA	Water	SM 2540C	

Analysis Batch: 351408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-136772-11	MGWC-2	Total/NA	Water	SM 2540C	
MB 400-351408/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 400-351408/2	Lab Control Sample	Total/NA	Water	SM 2540C	
400-136772-11 DU	MGWC-2	Total/NA	Water	SM 2540C	

QC Sample Results

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-350909/4
Matrix: Water
Analysis Batch: 350909

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			04/22/17 22:18	1
Fluoride	<0.082		0.20	0.082	mg/L			04/22/17 22:18	1
Sulfate	<0.70		1.0	0.70	mg/L			04/22/17 22:18	1

Lab Sample ID: LCS 400-350909/5
Matrix: Water
Analysis Batch: 350909

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	9.97		mg/L		100	90 - 110
Fluoride	10.0	10.4		mg/L		104	90 - 110
Sulfate	10.0	9.80		mg/L		98	90 - 110

Lab Sample ID: LCSD 400-350909/6
Matrix: Water
Analysis Batch: 350909

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	10.3		mg/L		103	90 - 110	1	15
Sulfate	10.0	9.79		mg/L		98	90 - 110	0	15

Lab Sample ID: 400-136622-C-1 MS
Matrix: Water
Analysis Batch: 350909

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	190	E	10.0	199	E 4	mg/L		131	80 - 120
Fluoride	0.25		10.0	10.7		mg/L		104	80 - 120
Sulfate	36		10.0	45.7		mg/L		101	80 - 120

Lab Sample ID: 400-136622-C-1 MSD
Matrix: Water
Analysis Batch: 350909

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	190	E	10.0	200	E 4	mg/L		137	80 - 120	0	20
Fluoride	0.25		10.0	10.7		mg/L		105	80 - 120	0	20
Sulfate	36		10.0	46.0		mg/L		103	80 - 120	1	20

Lab Sample ID: MB 400-350914/36
Matrix: Water
Analysis Batch: 350914

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			04/23/17 12:54	1
Fluoride	<0.082		0.20	0.082	mg/L			04/23/17 12:54	1
Sulfate	<0.70		1.0	0.70	mg/L			04/23/17 12:54	1

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 400-350914/37
Matrix: Water
Analysis Batch: 350914

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	9.97		mg/L		100	90 - 110
Fluoride	10.0	10.3		mg/L		103	90 - 110
Sulfate	10.0	9.75		mg/L		97	90 - 110

Lab Sample ID: LCSD 400-350914/38
Matrix: Water
Analysis Batch: 350914

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	9.99		mg/L		100	90 - 110	0	15
Fluoride	10.0	10.3		mg/L		103	90 - 110	0	15
Sulfate	10.0	9.77		mg/L		98	90 - 110	0	15

Lab Sample ID: 400-135632-A-1 MS
Matrix: Water
Analysis Batch: 350914

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	48		50.0	95.7		mg/L		95	80 - 120
Fluoride	<0.41		50.0	46.6		mg/L		93	80 - 120
Sulfate	130		50.0	173		mg/L		96	80 - 120

Lab Sample ID: 400-135632-A-1 MSD
Matrix: Water
Analysis Batch: 350914

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	48		50.0	95.4		mg/L		94	80 - 120	0	20
Fluoride	<0.41		50.0	47.5		mg/L		95	80 - 120	2	20
Sulfate	130		50.0	172		mg/L		93	80 - 120	1	20

Lab Sample ID: MB 400-350987/4
Matrix: Water
Analysis Batch: 350987

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			04/24/17 11:20	1
Fluoride	<0.082		0.20	0.082	mg/L			04/24/17 11:20	1
Sulfate	<0.70		1.0	0.70	mg/L			04/24/17 11:20	1

Lab Sample ID: LCS 400-350987/5
Matrix: Water
Analysis Batch: 350987

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	10.3		mg/L		103	90 - 110
Sulfate	10.0	9.56		mg/L		96	90 - 110

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 400-350987/6
Matrix: Water
Analysis Batch: 350987

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	1	15
Fluoride	10.0	10.2		mg/L		102	90 - 110	1	15
Sulfate	10.0	9.46		mg/L		95	90 - 110	1	15

Lab Sample ID: 400-136839-Q-4 MS
Matrix: Water
Analysis Batch: 350987

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	3.8		10.0	13.1		mg/L		94	80 - 120
Fluoride	<0.082		10.0	10.0		mg/L		100	80 - 120
Sulfate	<0.70		10.0	9.57		mg/L		96	80 - 120

Lab Sample ID: 400-136839-Q-4 MSD
Matrix: Water
Analysis Batch: 350987

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	3.8		10.0	13.1		mg/L		94	80 - 120	0	20
Fluoride	<0.082		10.0	10.1		mg/L		101	80 - 120	0	20
Sulfate	<0.70		10.0	9.63		mg/L		96	80 - 120	1	20

Lab Sample ID: MB 400-351445/14
Matrix: Water
Analysis Batch: 351445

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			04/26/17 15:40	1
Fluoride	<0.082		0.20	0.082	mg/L			04/26/17 15:40	1
Sulfate	<0.70		1.0	0.70	mg/L			04/26/17 15:40	1

Lab Sample ID: LCS 400-351445/15
Matrix: Water
Analysis Batch: 351445

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	10.2		mg/L		102	90 - 110

Lab Sample ID: LCSD 400-351445/16
Matrix: Water
Analysis Batch: 351445

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	10.5		mg/L		105	90 - 110	0	15
Sulfate	10.0	10.2		mg/L		102	90 - 110	1	15

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 400-137040-A-3 MS

Matrix: Water
Analysis Batch: 351445

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

Analyte	Sample	Sample	Spike	MS MS		Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier		Result	Qualifier					
Chloride	240	E	10.0	258	E 4	mg/L		142	80 - 120	
Fluoride	<0.082		10.0	11.1		mg/L		111	80 - 120	
Sulfate	580	E	10.0	591	E 4	mg/L		134	80 - 120	

Lab Sample ID: 400-137040-A-3 MSD

Matrix: Water
Analysis Batch: 351445

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

Analyte	Sample	Sample	Spike	MSD MSD		Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier							
Chloride	240	E	10.0	258	E 4	mg/L		139	80 - 120	0	20	
Fluoride	<0.082		10.0	10.9		mg/L		109	80 - 120	2	20	
Sulfate	580	E	10.0	602	E 4	mg/L		238	80 - 120	2	20	

Lab Sample ID: MB 400-351602/4

Matrix: Water
Analysis Batch: 351602

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	<0.89		1.0	0.89	mg/L			04/27/17 14:11	1
Fluoride	<0.082		0.20	0.082	mg/L			04/27/17 14:11	1
Sulfate	<0.70		1.0	0.70	mg/L			04/27/17 14:11	1

Lab Sample ID: LCS 400-351602/5

Matrix: Water
Analysis Batch: 351602

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

Analyte	Spike	LCS LCS		Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
Chloride	10.0	10.2		mg/L		102	90 - 110	
Fluoride	10.0	10.7		mg/L		107	90 - 110	
Sulfate	10.0	10.3		mg/L		103	90 - 110	

Lab Sample ID: LCSD 400-351602/6

Matrix: Water
Analysis Batch: 351602

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

Analyte	Spike	LCSD LCSD		Unit	D	%Rec	%Rec.	Limits	RPD	Limit
		Result	Qualifier							
Chloride	10.0	10.1		mg/L		101	90 - 110	1	15	
Fluoride	10.0	10.5		mg/L		105	90 - 110	2	15	
Sulfate	10.0	10.1		mg/L		101	90 - 110	2	15	

Lab Sample ID: 400-137112-I-6 MS

Matrix: Water
Analysis Batch: 351602

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

Analyte	Sample	Sample	Spike	MS MS		Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier		Result	Qualifier					
Chloride	28		10.0	36.3		mg/L		84	80 - 120	
Fluoride	<0.082		10.0	10.6		mg/L		106	80 - 120	
Sulfate	<0.70		10.0	11.1		mg/L		111	80 - 120	

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 400-137112-I-6 MSD
Matrix: Water
Analysis Batch: 351602

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	28		10.0	36.1		mg/L		82	80 - 120	1	20
Fluoride	<0.082		10.0	10.4		mg/L		104	80 - 120	2	20
Sulfate	<0.70		10.0	11.0		mg/L		110	80 - 120	1	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-352149/1-A ^5
Matrix: Water
Analysis Batch: 352271

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 352149

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/03/17 10:44	05/03/17 16:56	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/03/17 10:44	05/03/17 16:56	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/03/17 10:44	05/03/17 16:56	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/03/17 10:44	05/03/17 16:56	5
Boron	<0.021		0.050	0.021	mg/L		05/03/17 10:44	05/03/17 16:56	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/03/17 10:44	05/03/17 16:56	5
Calcium	<0.13		0.25	0.13	mg/L		05/03/17 10:44	05/03/17 16:56	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/03/17 10:44	05/03/17 16:56	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/03/17 10:44	05/03/17 16:56	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/03/17 10:44	05/03/17 16:56	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/03/17 10:44	05/03/17 16:56	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/03/17 10:44	05/03/17 16:56	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/03/17 10:44	05/03/17 16:56	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/03/17 10:44	05/03/17 16:56	5

Lab Sample ID: LCS 400-352149/2-A
Matrix: Water
Analysis Batch: 352271

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 352149

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0523		mg/L		105	80 - 120
Arsenic	0.0500	0.0509		mg/L		102	80 - 120
Barium	0.0500	0.0482		mg/L		96	80 - 120
Beryllium	0.0500	0.0476		mg/L		95	80 - 120
Boron	0.100	0.100		mg/L		100	80 - 120
Cadmium	0.0500	0.0500		mg/L		100	80 - 120
Calcium	5.00	4.66		mg/L		93	80 - 120
Chromium	0.0500	0.0507		mg/L		101	80 - 120
Cobalt	0.0500	0.0504		mg/L		101	80 - 120
Lead	0.0500	0.0496		mg/L		99	80 - 120
Lithium	0.0500	0.0521		mg/L		104	80 - 120
Molybdenum	0.100	0.0972		mg/L		97	80 - 120
Selenium	0.0500	0.0516		mg/L		103	80 - 120
Thallium	0.0100	0.00974		mg/L		97	80 - 120

QC Sample Results

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

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

Lab Sample ID: MB 400-352224/1-A ^5
Matrix: Water
Analysis Batch: 352727

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 352224

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0010		0.0025	0.0010	mg/L		05/03/17 16:30	05/05/17 17:31	5
Arsenic	<0.00046		0.0013	0.00046	mg/L		05/03/17 16:30	05/05/17 17:31	5
Barium	<0.00049		0.0025	0.00049	mg/L		05/03/17 16:30	05/05/17 17:31	5
Beryllium	<0.00034		0.0025	0.00034	mg/L		05/03/17 16:30	05/05/17 17:31	5
Boron	<0.021		0.050	0.021	mg/L		05/03/17 16:30	05/05/17 17:31	5
Cadmium	<0.00034		0.0025	0.00034	mg/L		05/03/17 16:30	05/05/17 17:31	5
Calcium	<0.13		0.25	0.13	mg/L		05/03/17 16:30	05/05/17 17:31	5
Chromium	<0.0011		0.0025	0.0011	mg/L		05/03/17 16:30	05/05/17 17:31	5
Cobalt	<0.00040		0.0025	0.00040	mg/L		05/03/17 16:30	05/05/17 17:31	5
Lead	<0.00035		0.0013	0.00035	mg/L		05/03/17 16:30	05/05/17 17:31	5
Lithium	<0.0032		0.0050	0.0032	mg/L		05/03/17 16:30	05/05/17 17:31	5
Molybdenum	<0.00085		0.015	0.00085	mg/L		05/03/17 16:30	05/05/17 17:31	5
Selenium	<0.00024		0.0013	0.00024	mg/L		05/03/17 16:30	05/05/17 17:31	5
Thallium	<0.000085		0.00050	0.000085	mg/L		05/03/17 16:30	05/05/17 17:31	5

Lab Sample ID: LCS 400-352224/2-A
Matrix: Water
Analysis Batch: 352727

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 352224

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0559		mg/L		112	80 - 120
Arsenic	0.0500	0.0534		mg/L		107	80 - 120
Barium	0.0500	0.0488		mg/L		98	80 - 120
Beryllium	0.0500	0.0533		mg/L		107	80 - 120
Boron	0.100	0.107		mg/L		107	80 - 120
Cadmium	0.0500	0.0540		mg/L		108	80 - 120
Calcium	5.00	5.07		mg/L		101	80 - 120
Chromium	0.0500	0.0503		mg/L		101	80 - 120
Cobalt	0.0500	0.0513		mg/L		103	80 - 120
Lead	0.0500	0.0534		mg/L		107	80 - 120
Lithium	0.0500	0.0541		mg/L		108	80 - 120
Molybdenum	0.100	0.105		mg/L		105	80 - 120
Selenium	0.0500	0.0529		mg/L		106	80 - 120
Thallium	0.0100	0.0109		mg/L		109	80 - 120

Lab Sample ID: 400-136772-6 MS
Matrix: Water
Analysis Batch: 352727

Client Sample ID: MGWC-8
Prep Type: Total Recoverable
Prep Batch: 352224

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0010		0.0500	0.0553		mg/L		111	75 - 125
Arsenic	0.00059	J	0.0500	0.0547		mg/L		108	75 - 125
Barium	0.040		0.0500	0.0893		mg/L		98	75 - 125
Beryllium	0.00067	J	0.0500	0.0530		mg/L		105	75 - 125
Boron	2.8	E	0.100	2.99	E 4	mg/L		194	75 - 125
Cadmium	0.00044	J	0.0500	0.0528		mg/L		105	75 - 125
Calcium	59		5.00	66.2	4	mg/L		153	75 - 125
Chromium	<0.0011		0.0500	0.0518		mg/L		104	75 - 125

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

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

Lab Sample ID: 400-136772-6 MS
Matrix: Water
Analysis Batch: 352727

Client Sample ID: MGWC-8
Prep Type: Total Recoverable
Prep Batch: 352224

Analyte	Sample	Sample Qualifier	Spike Added	MS	MS	Unit	D	%Rec	%Rec.	
	Result			Result	Qualifier				Limits	Limits
Cobalt	0.0050		0.0500	0.0564		mg/L		103	75 - 125	
Lead	<0.00035		0.0500	0.0519		mg/L		104	75 - 125	
Lithium	0.023		0.0500	0.0696		mg/L		93	75 - 125	
Molybdenum	0.0037	J	0.100	0.103		mg/L		100	75 - 125	
Selenium	0.0024		0.0500	0.0516		mg/L		98	75 - 125	
Thallium	0.00019	J	0.0100	0.0108		mg/L		106	75 - 125	

Lab Sample ID: 400-136772-6 MSD
Matrix: Water
Analysis Batch: 352727

Client Sample ID: MGWC-8
Prep Type: Total Recoverable
Prep Batch: 352224

Analyte	Sample	Sample Qualifier	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec.		RPD	RPD
	Result			Result	Qualifier				Limits	Limits	Limit	Limit
Antimony	<0.0010		0.0500	0.0546		mg/L		109	75 - 125	1	20	
Arsenic	0.00059	J	0.0500	0.0538		mg/L		106	75 - 125	2	20	
Barium	0.040		0.0500	0.0894		mg/L		98	75 - 125	0	20	
Beryllium	0.00067	J	0.0500	0.0523		mg/L		103	75 - 125	1	20	
Boron	2.8	E	0.100	3.01	E 4	mg/L		215	75 - 125	1	20	
Cadmium	0.00044	J	0.0500	0.0543		mg/L		108	75 - 125	3	20	
Calcium	59		5.00	66.0	4	mg/L		149	75 - 125	0	20	
Chromium	<0.0011		0.0500	0.0512		mg/L		102	75 - 125	1	20	
Cobalt	0.0050		0.0500	0.0561		mg/L		102	75 - 125	1	20	
Lead	<0.00035		0.0500	0.0519		mg/L		104	75 - 125	0	20	
Lithium	0.023		0.0500	0.0694		mg/L		93	75 - 125	0	20	
Molybdenum	0.0037	J	0.100	0.103		mg/L		99	75 - 125	0	20	
Selenium	0.0024		0.0500	0.0521		mg/L		99	75 - 125	1	20	
Thallium	0.00019	J	0.0100	0.0105		mg/L		103	75 - 125	3	20	

Lab Sample ID: 400-136917-D-13-B MS ^5
Matrix: Water
Analysis Batch: 352271

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 352149

Analyte	Sample	Sample Qualifier	Spike Added	MS	MS	Unit	D	%Rec	%Rec.	
	Result			Result	Qualifier				Limits	Limits
Antimony	<0.0010		0.0500	0.0546		mg/L		109	75 - 125	
Arsenic	0.0073		0.0500	0.0583		mg/L		102	75 - 125	
Barium	0.041		0.0500	0.0904		mg/L		100	75 - 125	
Beryllium	<0.00034		0.0500	0.0478		mg/L		96	75 - 125	
Boron	0.022	J	0.100	0.117		mg/L		95	75 - 125	
Cadmium	<0.00034		0.0500	0.0493		mg/L		99	75 - 125	
Calcium	46		5.00	54.7	4	mg/L		170	75 - 125	
Chromium	<0.0011		0.0500	0.0521		mg/L		104	75 - 125	
Cobalt	<0.00040		0.0500	0.0499		mg/L		100	75 - 125	
Lead	<0.00035		0.0500	0.0499		mg/L		100	75 - 125	
Lithium	<0.0032		0.0500	0.0441		mg/L		88	75 - 125	
Molybdenum	0.010	J	0.100	0.103		mg/L		92	75 - 125	
Selenium	0.0022		0.0500	0.0537		mg/L		103	75 - 125	
Thallium	<0.000085		0.0100	0.00959		mg/L		96	75 - 125	

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

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

Lab Sample ID: 400-136917-D-13-C MSD ^5

Matrix: Water
Analysis Batch: 352271

Client Sample ID: Matrix Spike Duplicate

Prep Type: Dissolved
Prep Batch: 352149

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0010		0.0500	0.0534		mg/L		107	75 - 125	2	20
Arsenic	0.0073		0.0500	0.0585		mg/L		102	75 - 125	0	20
Barium	0.041		0.0500	0.0897		mg/L		98	75 - 125	1	20
Beryllium	<0.00034		0.0500	0.0481		mg/L		96	75 - 125	0	20
Boron	0.022	J	0.100	0.119		mg/L		97	75 - 125	1	20
Cadmium	<0.00034		0.0500	0.0483		mg/L		97	75 - 125	2	20
Calcium	46		5.00	56.0	4	mg/L		196	75 - 125	2	20
Chromium	<0.0011		0.0500	0.0517		mg/L		103	75 - 125	1	20
Cobalt	<0.00040		0.0500	0.0500		mg/L		100	75 - 125	0	20
Lead	<0.00035		0.0500	0.0504		mg/L		101	75 - 125	1	20
Lithium	<0.0032		0.0500	0.0447		mg/L		89	75 - 125	1	20
Molybdenum	0.010	J	0.100	0.103		mg/L		92	75 - 125	0	20
Selenium	0.0022		0.0500	0.0522		mg/L		100	75 - 125	3	20
Thallium	<0.000085		0.0100	0.00971		mg/L		97	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 400-351566/14-A

Matrix: Water
Analysis Batch: 352077

Client Sample ID: Method Blank

Prep Type: Total/NA
Prep Batch: 351566

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/29/17 13:34	05/02/17 14:42	1

Lab Sample ID: LCS 400-351566/15-A

Matrix: Water
Analysis Batch: 352077

Client Sample ID: Lab Control Sample

Prep Type: Total/NA
Prep Batch: 351566

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.000986		mg/L		98	80 - 120

Lab Sample ID: 400-136659-G-1-B MS

Matrix: Water
Analysis Batch: 352077

Client Sample ID: Matrix Spike

Prep Type: Total/NA
Prep Batch: 351566

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00035		0.00201	0.00212		mg/L		88	80 - 120

Lab Sample ID: 400-136659-G-1-C MSD

Matrix: Water
Analysis Batch: 352077

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA
Prep Batch: 351566

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.00035		0.00201	0.00217		mg/L		90	80 - 120	2	20

TestAmerica Pensacola

QC Sample Results

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

TestAmerica Job ID: 400-136772-1
SDG: Ash Pond

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: MB 400-351677/14-A
Matrix: Water
Analysis Batch: 352077

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 351677

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000070		0.00020	0.000070	mg/L		04/29/17 13:34	05/02/17 11:04	1

Lab Sample ID: LCS 400-351677/15-A
Matrix: Water
Analysis Batch: 352077

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 351677

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00101	0.000937		mg/L		93	80 - 120

Lab Sample ID: 400-136473-J-4-E MS
Matrix: Water
Analysis Batch: 352077

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 351677

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.000070		0.00201	0.00187		mg/L		93	80 - 120

Lab Sample ID: 400-136473-J-4-F MSD
Matrix: Water
Analysis Batch: 352077

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 351677

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.000070		0.00201	0.00188		mg/L		93	80 - 120	0	20

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

Lab Sample ID: MB 400-350851/1
Matrix: Water
Analysis Batch: 350851

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			04/22/17 13:24	1

Lab Sample ID: LCS 400-350851/2
Matrix: Water
Analysis Batch: 350851

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: 400-136772-1 DU
Matrix: Water
Analysis Batch: 350851

Client Sample ID: MGWA-11
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	160		156		mg/L		0	5

QC Sample Results

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

TestAmerica Job ID: 400-136772-1
 SDG: Ash Pond

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

Lab Sample ID: MB 400-351408/1
Matrix: Water
Analysis Batch: 351408

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			04/26/17 16:26	1

Lab Sample ID: LCS 400-351408/2
Matrix: Water
Analysis Batch: 351408

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: 400-136772-11 DU
Matrix: Water
Analysis Batch: 351408

Client Sample ID: MGWC-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	600		598		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

Client Information
 Client Contact: Lauren Petty
 Company: Southern Company
 Address: 42 Inverness Center Parkway
 City: Birmingham
 State, Zip: AL, 35242
 Phone: 205-992-5417
 Email: lpetty@southernco.com
 Project Name: Plant McIntosh - Ash Pond
 Site: CCR

Lab Pk: Whitfire, Cheyenne R
E-Mail: cheyenne.whitfire@testamericainc.com

Carrier Tracking No(s):

COC No.:

Page: 1 of 1
Job #:

Analysis Requested

Due Date Requested:

TAT Requested (days):

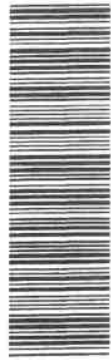
PO #:

WO #:

Project #:

SSOW#:

Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-grab)	Preservation Code	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of Containers	Special Instructions/Note:
					I	D	I	D		
MGWA-11	4/18/17	09:40	G	GW	X	X	X	X	3	
MGWA-10	4/18/17	10:10	G	GW	X	X	X	X	3	
MGWA-6	4/18/17	11:30	G	GW	X	X	X	X	3	
MGWA-5	4/18/17	11:30	G	GW	X	X	X	X	3	
MGWC-7	4/18/17	13:15	G	GW	X	X	X	X	3	
MGWC-8	4/18/17	13:45	G	GW	X	X	X	X	3	
MGWC-3	4/18/17	14:30	G	GW	X	X	X	X	3	
MGWC-1	4/18/17	15:15	G	GW	X	X	X	X	3	
FB-1	4/18/17	15:05	G	GW	X	X	X	X	3	
FERB-1	4/18/17	15:45	G	GW	X	X	X	X	3	



400-136772 Chain of Custody

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Radiochemical
 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 _____ Month

Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____

Relinquished by: _____ Date/Time: 4/18/17 17:20 Company: SPC

Relinquished by: _____ Date/Time: 4/20/17 09:43 Company: SPC

Relinquished by: _____ Date/Time: _____ Company: _____

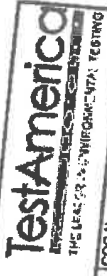
Custody Seals Intact: Custody Seal No.: 157051910.7 1.6/0.4
 Yes No

34, 1.8°C Ink 2



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

Chain of Custody Record



Client Information

Client Contact:
 Lauren Petty
 Company:
 Southern Company
 Address:
 42 Inverness Center Parkway
 City:
 Birmingham
 State, Zip:
 AL 35242
 Phone:
 205-992-5417
 Email:
 lpetty@southern.com
 Project Name:
 Plant McIntosh - Ash Pond
 Site:
 CCR

Sampler:
 T. Payne 22; V. Thomas 22;
 Phone:

Lab P#: Whitlire, Cheyenne R
 E-Mail: cheyenne.whitlire@testamerica.com

Carrier Tracking No(s):
 Page: 1 of 1
 Job #: 400-136772

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 - Ammonia
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 Other:
 M - Hexane
 N - None
 O - Acetone
 P - Na2SO4
 Q - Na2S2O3
 R - Na2S2O8
 S - H2SO4
 T - TSP
 U - Deionized Water
 V - Acetone
 W - MCAA
 X - EDTA
 Y - ph 4.5
 Z - other (specify)

Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp G-grab)	Preservation Code	Field Filtered Sample (Yes or No)	Matrix (W-water, S-sediment, O-oil, G-gas, L-liquid)	Total Number of Containers	Special Instructions/Notes
MGWC-2	4/18/17	8:55	G	GW	X		4	extra volume for radium analysis
MGWC-12	4/18/17	10:15	G	GW	X		3	

Health - Part 257 Appendix H & I EPA 8020 & EPA 7470
 TDS - SM 2540C: CLF, 904 - EPA 300
 Radium 226 & 228 - SM 466 9315 & 9320

Possible Hazard Identification:
 Non-Hazard
 Flammable
 Skin Irritant
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by:
 Relinquished by:
 Relinquished by:
 Relinquished by:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client
 Special Instructions/QC Requirements:
 Disposal By: Lab
 Archive For: Month

Method of Shipment:
 Date/Time:
 Received by:
 Date/Time:
 Received by:
 Date/Time:
 Cooler Temperature(°) °C and Other Remarks: 0.0°C 1P-2

Company: TA
 Company: TA
 Company: TA

Company: TA
 Company: TA
 Company: TA

Company: TA
 Company: TA
 Company: TA

Company: TA
 Company: TA
 Company: TA

Company: TA
 Company: TA
 Company: TA

Login Sample Receipt Checklist

Client: Southern Company

Job Number: 400-136772-1

SDG Number: Ash Pond

Login Number: 136772

List Number: 1

Creator: Siddoway, Benjamin

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.4°C, 1.8°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.	False	MGWC-12 cancelled for resampling.
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 McIntosh

TestAmerica Job ID: 400-136772-1
 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





Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

July 26, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant McIntosh
Pace Project No.: 30187586

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on June 23, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant McIntosh
Pace Project No.: 30187586

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant McIntosh
Pace Project No.: 30187586

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30187586001	MGWA-6	Water	06/21/16 08:48	06/23/16 10:50
30187586002	DUP-1	Water	06/21/16 00:01	06/23/16 10:50
30187586003	MGWC-12	Water	06/21/16 12:56	06/23/16 10:50
30187586004	MGWC-3	Water	06/21/16 11:00	06/23/16 10:50
30187586005	FB-1	Water	06/21/16 15:45	06/23/16 10:50
30187586006	FERB-1	Water	06/21/16 15:50	06/23/16 10:50
30187586007	MGWC-7	Water	06/21/16 09:20	06/23/16 10:50
30187586008	MGWC-2	Water	06/21/16 11:25	06/23/16 10:50
30187586009	MGWC-1	Water	06/21/16 12:30	06/23/16 10:50
30187586010	MGWC-8	Water	06/21/16 08:55	06/23/16 10:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant McIntosh
 Pace Project No.: 30187586

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30187586001	MGWA-6	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30187586002	DUP-1	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30187586003	MGWC-12	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30187586004	MGWC-3	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30187586005	FB-1	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30187586006	FERB-1	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30187586007	MGWC-7	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30187586008	MGWC-2	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30187586009	MGWC-1	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1
30187586010	MGWC-8	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	CMC	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McIntosh
 Pace Project No.: 30187586

Sample: MGWA-6		Lab ID: 30187586001	Collected: 06/21/16 08:48	Received: 06/23/16 10:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.204 ± 0.128 (0.212)		pCi/L	07/25/16 07:51	13982-63-3	
		C:94% T:NA					
Radium-228	EPA 9320	0.307 ± 0.305 (0.623)		pCi/L	07/20/16 21:34	15262-20-1	
		C:77% T:86%					
Total Radium	Total Radium Calculation	0.511 ± 0.433 (0.835)		pCi/L	07/26/16 14:16	7440-14-4	

Sample: DUP-1		Lab ID: 30187586002	Collected: 06/21/16 00:01	Received: 06/23/16 10:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.225 ± 0.118 (0.149)		pCi/L	07/25/16 08:17	13982-63-3	
		C:97% T:NA					
Radium-228	EPA 9320	0.285 ± 0.299 (0.616)		pCi/L	07/20/16 21:34	15262-20-1	
		C:78% T:84%					
Total Radium	Total Radium Calculation	0.510 ± 0.417 (0.765)		pCi/L	07/26/16 14:16	7440-14-4	

Sample: MGWC-12		Lab ID: 30187586003	Collected: 06/21/16 12:56	Received: 06/23/16 10:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.0796 ± 0.0814 (0.152)		pCi/L	07/25/16 08:17	13982-63-3	
		C:93% T:NA					
Radium-228	EPA 9320	0.212 ± 0.388 (0.849)		pCi/L	07/25/16 12:43	15262-20-1	
		C:81% T:78%					
Total Radium	Total Radium Calculation	0.292 ± 0.469 (1.00)		pCi/L	07/26/16 14:16	7440-14-4	

Sample: MGWC-3		Lab ID: 30187586004	Collected: 06/21/16 11:00	Received: 06/23/16 10:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.756 ± 0.230 (0.175)		pCi/L	07/25/16 08:17	13982-63-3	
		C:89% T:NA					
Radium-228	EPA 9320	0.957 ± 0.398 (0.602)		pCi/L	07/20/16 21:34	15262-20-1	
		C:80% T:83%					
Total Radium	Total Radium Calculation	1.71 ± 0.628 (0.777)		pCi/L	07/26/16 14:16	7440-14-4	

Sample: FB-1		Lab ID: 30187586005	Collected: 06/21/16 15:45	Received: 06/23/16 10:50	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.0308 ± 0.0569 (0.129)		pCi/L	07/25/16 09:22	13982-63-3	
		C:99% T:NA					
Radium-228	EPA 9320	0.128 ± 0.242 (0.533)		pCi/L	07/20/16 21:34	15262-20-1	
		C:83% T:86%					

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McIntosh
 Pace Project No.: 30187586

Sample: FB-1 Lab ID: 30187586005 Collected: 06/21/16 15:45 Received: 06/23/16 10:50 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	0.159 ± 0.299 (0.662)	pCi/L	07/26/16 14:16	7440-14-4	

Sample: FERB-1 Lab ID: 30187586006 Collected: 06/21/16 15:50 Received: 06/23/16 10:50 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.0543 ± 0.0737 (0.155) C:99% T:NA	pCi/L	07/25/16 08:17	13982-63-3	
Radium-228	EPA 9320	0.791 ± 0.362 (0.576) C:83% T:80%	pCi/L	07/20/16 21:34	15262-20-1	
Total Radium	Total Radium Calculation	0.845 ± 0.436 (0.731)	pCi/L	07/26/16 14:16	7440-14-4	

Sample: MGWC-7 Lab ID: 30187586007 Collected: 06/21/16 09:20 Received: 06/23/16 10:50 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.366 ± 0.159 (0.179) C:85% T:NA	pCi/L	07/25/16 08:17	13982-63-3	
Radium-228	EPA 9320	0.647 ± 0.449 (0.853) C:74% T:68%	pCi/L	07/20/16 21:34	15262-20-1	
Total Radium	Total Radium Calculation	1.01 ± 0.608 (1.03)	pCi/L	07/26/16 14:16	7440-14-4	

Sample: MGWC-2 Lab ID: 30187586008 Collected: 06/21/16 11:25 Received: 06/23/16 10:50 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.135 ± 0.106 (0.187) C:92% T:NA	pCi/L	07/25/16 08:17	13982-63-3	
Radium-228	EPA 9320	1.05 ± 0.566 (1.01) C:83% T:58%	pCi/L	07/25/16 12:44	15262-20-1	
Total Radium	Total Radium Calculation	1.19 ± 0.672 (1.20)	pCi/L	07/26/16 14:16	7440-14-4	

Sample: MGWC-1 Lab ID: 30187586009 Collected: 06/21/16 12:30 Received: 06/23/16 10:50 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.751 ± 0.242 (0.231) C:80% T:NA	pCi/L	07/25/16 08:17	13982-63-3	
Radium-228	EPA 9320	1.26 ± 0.561 (0.933) C:84% T:64%	pCi/L	07/25/16 12:44	15262-20-1	
Total Radium	Total Radium Calculation	2.01 ± 0.803 (1.16)	pCi/L	07/26/16 14:16	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McIntosh
 Pace Project No.: 30187586

Sample: **MGWC-8** Lab ID: **30187586010** Collected: 06/21/16 08:55 Received: 06/23/16 10:50 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.626 ± 0.221 (0.227) C:83% T:NA	pCi/L	07/25/16 07:51	13982-63-3	
Radium-228	EPA 9320	0.269 ± 0.439 (0.954) C:83% T:71%	pCi/L	07/20/16 21:31	15262-20-1	
Total Radium	Total Radium Calculation	0.895 ± 0.660 (1.18)	pCi/L	07/26/16 14:16	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McIntosh
 Pace Project No.: 30187586

QC Batch: 225791 Analysis Method: EPA 9315
 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
 Associated Lab Samples: 30187586001, 30187586002, 30187586003, 30187586004, 30187586005, 30187586006, 30187586007,
 30187586008, 30187586009, 30187586010

METHOD BLANK: 1106280 Matrix: Water
 Associated Lab Samples: 30187586001, 30187586002, 30187586003, 30187586004, 30187586005, 30187586006, 30187586007,
 30187586008, 30187586009, 30187586010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0524 ± 0.0727 (0.154) C:99% T:NA	pCi/L	07/25/16 07:50	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McIntosh
 Pace Project No.: 30187586

QC Batch: 226180 Analysis Method: EPA 9320
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
 Associated Lab Samples: 30187586001, 30187586002, 30187586003, 30187586004, 30187586005, 30187586006, 30187586007,
 30187586008, 30187586009, 30187586010

METHOD BLANK: 1107959 Matrix: Water
 Associated Lab Samples: 30187586001, 30187586002, 30187586003, 30187586004, 30187586005, 30187586006, 30187586007,
 30187586008, 30187586009, 30187586010

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.848 ± 0.398 (0.649) C:85% T:72%	pCi/L	07/20/16 21:32	

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QUALIFIERS

Project: Plant McIntosh
Pace Project No.: 30187586

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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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

Custody seal IDs
 20160621-01
 20160621-02

Sample Shipment Date:⁸ 6/21/16
 Sample Received Date:⁹

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

Sampled By:¹⁰ Amanda Starnac (AS)
 Myles Rogers (MRS)
 Will Virgo (WV)
 Signature: *Amelia Hesse*

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

LAB USE ONLY
 Work Order No. *MR 06/22/16*
 Reviewed By: *AZF O 829*
 11 Page 1 of 1

WO#: 30187586



LAB USE ONLY LAB ID	Sample Number ¹⁴	Collection ¹⁵		Sample Description ¹⁶	Sample Type ¹⁷	Matrix ¹⁸	No. of Containers ¹⁹	ANALYSIS REQUESTED ²¹			PRESERVATIVE ²⁰			Sample Type Key: 22
		Date	Time					Metals app. III & IV EPA 6020 & EPA 7470	CL, F, SO4 EPA 300 TDS SM2540C	Radium 226 & 228 Ga Tech	HNO3 N	Ice I	HNO3 HNO3	
	MGWA-6	6/21/16	0848		G	GW	3	✓	✓	✓	✓	✓	✓	1 001
	DUP-1	6/21/16	—		G	GW	3	✓	✓	✓	✓	✓	✓	2 002
	MGWC-12	6/21/16	1250		G	GW	3	✓	✓	✓	✓	✓	✓	3 003
	MGWC-3	6/21/16	1100		G	GW	3	✓	✓	✓	✓	✓	✓	4 004
	FB-1	6/21/16	1545		G	DI	3	✓	✓	✓	✓	✓	✓	5 005
	FERB-1	6/21/16	1560		G	DI	3	✓	✓	✓	✓	✓	✓	6 006
	MGWC-7	6/21/16	0920		G	GW	3	✓	✓	✓	✓	✓	✓	7 007
	MGWC-2	6/21/16	1125		G	GW	3	✓	✓	✓	✓	✓	✓	8 008
	MGWC-1	6/21/16	1230		G	GW	3	✓	✓	✓	✓	✓	✓	9 009
	MGWC-8	6/21/16	8:55		G	GW	3	✓	✓	✓	✓	✓	✓	10 010

LAB USE ONLY: Sample Receipt Information²³
 Relinquished by:²⁶ *AMANDA STARNAC* Date/Time 6/21/16 17:45
 Received by:²⁷ *AMANDA STARNAC* Date/Time 6-22-16 01:00
 Relinquished by: *AMANDA STARNAC* Date/Time 6/23/16 10:50
 Received by: *Karen E. Hise* Date/Time 6/23/16 10:50

Abraham, 06/22/16, 1515, 1cc, 2'c
In fact, 2 p. Free Coverer.

Sample Condition Upon Receipt Pittsburgh



Client Name: Georgia Power

Project # 30187586

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 775685464034

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Thermometer Used NIA Type of Ice: Wet Blue None

Cooler Temperature Observed Temp NIA °C Correction Factor: NIA °C Final Temp: NIA °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: KH 6/23/16

Comments:	Yes	No	N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.
Sample Labels match COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
-Includes date/time/ID/Analysis Matrix: <u>W+</u>				
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
Correct Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
-Pace Containers Used:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Filtered volume received for Dissolved tests	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
exceptions: VOA, coliform, TOC, O&G, Phenolics	Initial when completed <u>KH</u>		Date/time of preservation	
	Lot # of added preservative			
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.
Trip Blank Present:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15.
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Client Notification/ Resolution:
 Person Contacted: _____ Date/Time: _____ Contacted By: _____
 Comments/ Resolution: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Quality Control Sample Performance Assessment



www.paceanalytical.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: RMK
Date: 7/16/2016
Worklist: 30293
Matrix: DW

Method Blank Assessment

MB Sample ID: 1106280
MB Concentration: 0.052
MB Counting Uncertainty: 0.072
MB MDC: 0.154
MB Numerical Performance Indicator: 1.42
MB Status vs Numerical Indicator: N/A
MB Status vs. MDC: Pass

Laboratory Control Sample Assessment

Count Date:	Y
7/26/2016	LCS30293
16-001	16-001
47.784	47.784
0.10	0.10
0.500	0.500
9.548	9.555
0.449	0.449
7.234	7.450
-6.27	-5.67
75.77%	77.97%
N/A	N/A
Pass	Pass

Count Date: 7/26/2016
Spike I.D.: 16-001
Spike Concentration (pCi/L): 47.784
Volume Used (mL): 0.10
Aliquot Volume (L, g, F): 0.500
Target Conc. (pCi/L, g, F): 9.548
Uncertainty (Calculated): 0.449
Result (pCi/L, g, F): 7.234
LCS/LCSD Counting Uncertainty (pCi/L, g, F): 0.567
Numerical Performance Indicator: -6.27
Percent Recovery: 75.77%
Status vs Numerical Indicator: N/A
Status vs Recovery: Pass

Duplicate Sample Assessment

Sample I.D.: LCS30293
Duplicate Sample I.D.: LCS30293
Sample Result (pCi/L, g, F): 7.234
Sample Duplicate Result (pCi/L, g, F): 0.567
Sample Duplicate Counting Uncertainty (pCi/L, g, F): 7.450
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.572
Are sample and/or duplicate results below MDC? NO
Duplicate Numerical Performance Indicator: -0.525
Duplicate RPD: 2.94%
Duplicate Status vs Numerical Indicator: N/A
Duplicate Status vs RPD: Pass

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.

Sample Matrix Spike Control Assessment

Sample Collection Date:
Sample I.D.:
Sample MS I.D.:
Sample MSD I.D.:
Spike I.D.:
MS/MSD Decay Corrected Spike Concentration (pCi/mL):
Spike Volume Used in MS (mL):
Spike Volume Used in MSD (mL):
MS Aliquot (L, g, F):
MS Target Conc. (pCi/L, g, F):
MSD Aliquot (L, g, F):
MSD Target Conc. (pCi/L, g, F):
Spike uncertainty (calculated):
Sample Result:
Sample Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Result:
Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):
MS Numerical Performance Indicator:
MS Numerical Performance Indicator:
MS Percent Recovery:
MS Status vs Numerical Indicator:
MSD Status vs Numerical Indicator:
MS Status vs Recovery:
MSD Status vs Recovery:

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.:
Sample MS I.D.:
Sample MSD I.D.:
Sample Matrix Spike Result:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):
Duplicate Numerical Performance Indicator:
MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPD:

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

Comments:

Handwritten: 7/26/16

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



Test: Ra-228
Analyst: JLLW
Date: 7/18/2016
Worklist: 30339
Matrix: DW

Method Blank Assessment

MB Sample ID
MB concentration:
MB Counting Uncertainty:
MB MDC:
MB Numerical Performance Indicator:
MB Status vs Numerical Indicator:
MB Status vs. MDC:

Laboratory Control Sample Assessment

LCSB (Y or N)?	Y	N
LCSB30339	7/25/2016	16-025
LCS30339	26.111	0.20
Count Date:	7/25/2016	0.813
Spike I.D.:	16-025	6.427
Spike Concentration (pCi/mL):	26.111	6.623
Volume Used (mL):	0.20	0.731
Aliquot Volume (L, g, F):	0.806	0.44
Target Conc. (pCi/L, g, F):	6.479	103.04%
Uncertainty (Calculated):	0.466	N/A
Result (pCi/L, g, F):	7.197	Pass
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.808	
Numerical Performance Indicator:	1.51	
Percent Recovery:	111.09%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	

Duplicate Sample Assessment

Sample I.D.: LCS30339
Duplicate Sample I.D.: LCS30339
Spike I.D.: 7.197
Sample Result Counting Uncertainty (pCi/L, g, F): 0.808
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 6.623
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.731
Are sample and/or duplicate results below MDC? NO
Duplicate Numerical Performance Indicator: 1.034
Duplicate RPD: 8.32%
Duplicate Status vs Numerical Indicator: N/A
Duplicate Status vs RPD: Pass

Enter Duplicate sample IDs if other than LCS/LCSD in the space below:

Sample Matrix Spike Control Assessment

Sample Collection Date:
Sample I.D.:
Sample MS I.D.:
Sample MSD I.D.:
Spike I.D.:
MS/MSD Decay Corrected Spike Concentration (pCi/mL):
Spike Volume Used in MS (mL):
Spike Volume Used in MSD (mL):
MS Aliquot (L, g, F):
MS Target Conc. (pCi/L, g, F):
MSD Aliquot (L, g, F):
MSD Target Conc. (pCi/L, g, F):
Spike uncertainty (calculated):
Sample Result:
Sample Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Result:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
MS Numerical Performance Indicator:
MS Numerical Performance Indicator:
MS Percent Recovery:
MSD Percent Recovery:
MS Status vs Numerical Indicator:
MSD Status vs Numerical Indicator:
MS Status vs Recovery:
MSD Status vs Recovery:

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.:
Sample MS I.D.:
Sample MSD I.D.:
Sample Matrix Spike Result:
Sample Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Duplicate Numerical Performance Indicator:
MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPD:

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

Comments:

UAW 7/20/16



Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

July 25, 2016

Maria Padilla
GA Power
2480 Maner Rd
Atlanta, GA 30339

RE: Project: Plant McIntosh
Pace Project No.: 30187368

Dear Maria Padilla:

Enclosed are the analytical results for sample(s) received by the laboratory on June 22, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Report reissued 7/25/16 to reflect the addition of the missing 226 QC in the report.

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

Sincerely,

Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant McIntosh
Pace Project No.: 30187368

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant McIntosh
Pace Project No.: 30187368

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30187368001	MGWA-10	Water	06/20/16 14:50	06/22/16 10:00
30187368002	MGWA-5	Water	06/20/16 14:45	06/22/16 10:00
30187368003	MGWA-11	Water	06/20/16 16:49	06/22/16 10:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant McIntosh
 Pace Project No.: 30187368

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30187368001	MGWA-10	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30187368002	MGWA-5	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1
30187368003	MGWA-11	EPA 9315	RMK	1
		EPA 9320	JLW	1
		Total Radium Calculation	RMK	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Plant McIntosh
 Pace Project No.: 30187368

Sample: MGWA-10 Lab ID: 30187368001 Collected: 06/20/16 14:50 Received: 06/22/16 10:00 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.430 ± 0.209 (0.298) C:96% T:NA	pCi/L	07/19/16 12:39	13982-63-3	
Radium-228	EPA 9320	-0.125 ± 0.232 (0.570) C:79% T:87%	pCi/L	07/15/16 12:30	15262-20-1	
Total Radium	Total Radium Calculation	0.305 ± 0.441 (0.868)	pCi/L	07/19/16 16:26	7440-14-4	

Sample: MGWA-5 Lab ID: 30187368002 Collected: 06/20/16 14:45 Received: 06/22/16 10:00 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.0652 ± 0.142 (0.324) C:95% T:NA	pCi/L	07/19/16 12:39	13982-63-3	
Radium-228	EPA 9320	0.119 ± 0.261 (0.573) C:78% T:86%	pCi/L	07/15/16 12:30	15262-20-1	
Total Radium	Total Radium Calculation	0.184 ± 0.403 (0.897)	pCi/L	07/19/16 16:26	7440-14-4	

Sample: MGWA-11 Lab ID: 30187368003 Collected: 06/20/16 16:49 Received: 06/22/16 10:00 Matrix: Water
 PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 9315	0.271 ± 0.185 (0.315) C:96% T:NA	pCi/L	07/19/16 12:40	13982-63-3	
Radium-228	EPA 9320	0.285 ± 0.349 (0.732) C:78% T:85%	pCi/L	07/15/16 12:39	15262-20-1	
Total Radium	Total Radium Calculation	0.556 ± 0.534 (1.05)	pCi/L	07/19/16 16:26	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McIntosh
 Pace Project No.: 30187368

QC Batch: 225790 Analysis Method: EPA 9315
 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium
 Associated Lab Samples: 30187368001, 30187368002, 30187368003

METHOD BLANK: 1106279 Matrix: Water
 Associated Lab Samples: 30187368001, 30187368002, 30187368003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.208 ± 0.157 (0.268) C:97% T:NA	pCi/L	07/19/16 06:56	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: Plant McIntosh
 Pace Project No.: 30187368

QC Batch: 225698 Analysis Method: EPA 9320
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
 Associated Lab Samples: 30187368001, 30187368002, 30187368003

METHOD BLANK: 1105643 Matrix: Water
 Associated Lab Samples: 30187368001, 30187368002, 30187368003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.284 ± 0.296 (0.604) C:79% T:79%	pCi/L	07/15/16 12:25	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant McIntosh
Pace Project No.: 30187368

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

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

WO#: 30187368



023367324

custody seal ID: 20160620-01

Sample Shipment Date:⁸ 6/20/16

Sample Received Date:⁹ 6/20/16

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

Sampled By:¹⁰ Will Virgo (NV)
Myles Roper (MRS)
Amanda Storer (AS)
Stephanie Sker
 Signature

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

HNO3	Ice	PRESERVATIVE ²⁰		ANALYSIS REQUESTED ²¹	Sample Type	Matrix	No. of Containers	Sample Description ¹⁶	Collection ¹⁵		Sample Number ¹⁴	LAB USE ONLY ²⁵
		N	I						MN03	N		
				Metals app. III & IV EPA 6020 & EPA 7470 Cl, F, SO4 EPA 300 TDS SM2540C	GW	GW	3	6-20-16 1450	6-20-16	1450	MGWA-10	001
					GW	3	6-20-16 1445	6-20-16	1445		MGWA-5	002
					GW	3	6-22-16 1649	6-22-16	1649		MGWA-11	003

LAB USE ONLY ²⁵	Comments
	001
	002
	003

LAB USE ONLY: Sample Receipt Information²⁸

Relinquished by:²⁶ [Signature] Date/Time 6-21-16 @ 10:00
 Received by:²⁷ [Signature] Date/Time 6-21-16 @ 14:07
 Relinquished by: [Signature] Date/Time 6-21-16 @ 14:07
 Received by: [Signature] Pace Date/Time 6/22/16 10:00

Sample Condition Upon Receipt Pittsburgh

30187368



Client Name: GA Power Project # _____

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 7765 7425 9246

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Thermometer Used N/A Type of Ice: Wet Blue None

Cooler Temperature Observed Temp N/A °C Correction Factor: N/A °C Final Temp: N/A °C
 Temp should be above freezing to 6°C

Date and Initials of person examining contents: RTB 6/22/16

Comments:	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:	X			4.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: <u>WT</u>	X			5.
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used: -Pace Containers Used:	X			10.
Containers Intact:	X			11.
Filtered volume received for Dissolved tests			X	12.
All containers needing preservation have been checked.	X			13. <u>pH < 2</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	X			
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed <u>6/22/16</u> Date/time of preservation <u>RTB</u>
				Lot # of added preservative
Headspace in VOA Vials (>6mm):			X	14.
Trip Blank Present:			X	15.
Trip Blank Custody Seals Present			X	

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Quality Control Sample Performance Assessment



www.paceanalytical.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
 Analyst: RMK
 Date: 7/10/2016
 Worklist: 30292
 Matrix: DW

Method Blank Assessment

MB Sample ID: 1106279
 MB concentration: 0.208
 MB Counting Uncertainty: 0.154
 MB MDC: 0.268
 MB Numerical Performance Indicator: 2.65
 MB Status vs Numerical Indicator: N/A
 MB Status vs. MDC: Pass

Laboratory Control Sample Assessment

LCS#	Y or N?	Count Date
LCS30292	Y	7/19/2016
LCS30292	Y	7/19/2016
16-001		47.784
0.10		0.500
0.500		9.555
9.548		0.449
0.449		7.310
7.407		0.736
0.702		5.10
5.04		76.51%
77.57%		N/A
N/A		Pass
Pass		Pass

Count Date: 7/19/2016
 Spike I.D.: 16-001
 Spike Concentration (pCi/mL): 47.784
 Volume Used (mL): 0.10
 Aliquot Volume (L, g, F): 0.500
 Target Conc. (pCi/L, g, F): 9.548
 Uncertainty (Calculated): 0.449
 Result (pCi/L, g, F): 7.407
 LCS/LCSD Counting Uncertainty (pCi/L, g, F): 0.702
 Numerical Performance Indicator: 5.04
 Percent Recovery: 77.57%
 Status vs Numerical Indicator: N/A
 Status vs Recovery: Pass

Duplicate Sample Assessment

Sample I.D.: LCS30292
 Duplicate Sample I.D.: LCS30292
 Sample Result (pCi/L, g, F): 7.407
 Sample Duplicate Counting Uncertainty (pCi/L, g, F): 0.702
 Sample Duplicate Result (pCi/L, g, F): 7.310
 Sample Duplicate Counting Uncertainty (pCi/L, g, F): 0.736
 Are sample and/or duplicate results below MDC? NO
 Duplicate Numerical Performance Indicator: 1.186
 Duplicate RPD: 1.31%
 Duplicate Status vs Numerical Indicator: N/A
 Duplicate Status vs RPD: Pass

Enter Duplicate sample I.D.s if other than LCS/LCSD in the space below.

Sample Matrix Spike Control Assessment

Sample Collection Date:
 Sample I.D.:
 Sample MS I.D.:
 Sample MSD I.D.:
 MS/MSD Decay Corrected Spike Concentration (pCi/mL):
 Spike Volume Used in MS (mL):
 Spike Volume Used in MSD (mL):
 MS Aliquot (L, g, F):
 MS Target Conc. (pCi/L, g, F):
 MSD Aliquot (L, g, F):
 MSD Target Conc. (pCi/L, g, F):
 Spike uncertainty (calculated):
 Sample Result:
 Sample Result Counting Uncertainty (pCi/L, g, F):
 Sample Matrix Spike Result:
 Matrix Spike Counting Uncertainty (pCi/L, g, F):
 Sample Matrix Spike Duplicate Result:
 Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
 MS Numerical Performance Indicator:
 MS Numerical Performance Indicator:
 MSD Percent Recovery:
 MSD Percent Recovery:
 MS Status vs Numerical Indicator:
 MSD Status vs Numerical Indicator:
 MS Status vs Recovery:
 MSD Status vs Recovery:

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.:
 Sample MS I.D.:
 Sample MSD I.D.:
 Sample Matrix Spike Result:
 Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
 Sample Matrix Spike Duplicate Result:
 Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
 Duplicate Numerical Performance Indicator:
 MS/MSD Duplicate RPD:
 MS/MSD Duplicate Status vs Numerical Indicator:
 MS/MSD Duplicate Status vs RPD:

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

Comments:

Handwritten signature and date: 7/19/16

Quality Control Sample Performance Assessment



Test: Ra-228
Analyst: JLW
Date: 7/12/2016
Worklist: 30279
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID: 1105643
MB concentration: 0.284
M/B Counting Uncertainty: 0.292
MB MDC: 0.604
MB Numerical Performance Indicator: 1.91
MB Status vs Numerical Indicator: N/A
MB Status vs MDC: Pass

Laboratory Control Sample Assessment

LCSD (Y or N)?	Y
LCS30279	7/15/2016
Count Date:	7/15/2016
Spike I.D.:	15-018
Spike Concentration (pCi/mL):	23.357
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.804
Target Conc. (pCi/L, g, F):	5.813
Uncertainty (Calculated):	0.233
Result (pCi/L, g, F):	5.240
LCSD Counting Uncertainty (pCi/L, g, F):	0.661
Numerical Performance Indicator:	-1.60
Percent Recovery:	90.15%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass

Duplicate Sample Assessment

Sample I.D.: LCS30279
Duplicate Sample I.D.: LCSB30279
Sample Result (pCi/L, g, F): 5.240
Sample Result Counting Uncertainty (pCi/L, g, F): 0.661
Sample Duplicate Result (pCi/L, g, F): 5.384
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.718
Are sample and/or duplicate results below MDC? NO
Duplicate Numerical Performance Indicator: -0.289
Duplicate RPD: 2.71%
Duplicate Status vs Numerical Indicator: N/A
Duplicate Status vs RPD: Pass

Sample Matrix Spike Control Assessment

Sample Collection Date:
Sample I.D.:
Sample MS I.D.:
Sample MSD I.D.:
Spike I.D.:

MS/MSD Decay Corrected Spike Concentration (pCi/mL):
Spike Volume Used in MS (mL):
Spike Volume Used in MSD (mL):
MS Aliquot (L, g, F):
MS Target Conc. (pCi/L, g, F):
MSD Aliquot (L, g, F):
MSD Target Conc. (pCi/L, g, F):
Spike uncertainty (calculated):

Sample Result:
Sample Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Result:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
MS Numerical Performance Indicator:
MSD Numerical Performance Indicator:
MS Percent Recovery:
MSD Percent Recovery:
MS Status vs Numerical Indicator:
MSD Status vs Numerical Indicator:
MS Status vs Recovery:
MSD Status vs Recovery:

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.:
Sample MS I.D.:
Sample MSD I.D.:
Sample Matrix Spike Result:
Sample Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Duplicate Numerical Performance Indicator:
MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPD:

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

Comments:

Handwritten signature/initials

Product Name: Low-Flow System

Date: 2016-05-05 17:06:17

Project Information:

Operator Name N. Vrey
Company Name ERM
Project Name Plant McIntosh AP
Site Name Plant McIntosh AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444107
Turbidity Make/Model HANNA HI98703

Pump Information:

Pump Model/Type proactive Alexis V2
Tubing Type LPDE
Tubing Diameter 0.17 in
Tubing Length 42 ft

Pump placement from TOC 36 ft

Well Information:

Well ID MGWA-06
Well diameter 2 in
Well Total Depth 41.93 ft
Screen Length 10 ft
Depth to Water 16.50 ft

Pumping Information:

Final Pumping Rate 0.1 mL/min
Total System Volume 0.2774638 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 5.1 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	16:42:16	600.02	21.47	7.13	401.53	0.92	16.67	0.88	-36.79
Last 5	16:47:16	900.02	21.29	7.13	489.83	1.14	16.67	1.30	-38.07
Last 5	16:52:16	1200.02	21.08	7.13	490.53	0.97	16.67	0.98	-37.61
Last 5	16:57:16	1500.02	22.04	7.13	494.74	0.65	16.67	0.82	-38.55
Last 5	17:02:16	1800.02	22.89	7.13	487.34	0.90	16.67	0.81	-42.88
Variance 0			-0.20	-0.00	0.69			-0.31	0.45
Variance 1			0.96	-0.00	4.21			-0.17	-0.94
Variance 2			0.85	0.00	-7.40			-0.01	-4.33

Notes

Continued from previous screen went blank on iPad
Start purge: 1606. End purge 1657. Sample 1730

Grab Samples

Product Name: Low-Flow System

Date: 2016-05-05 12:44:34

Project Information:

Operator Name Adria Reimer
Company Name ERM
Project Name Plant McIntosh AP
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444108
Turbidity Make/Model

Pump Information:

Pump Model/Type Proactive Alexis V2.0 Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 45 ft

Pump placement from TOC 38 ft

Well Information:

Well ID MGWA-09
Well diameter 2 in
Well Total Depth 43.05 ft
Screen Length 10 ft
Depth to Water 18.23 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.540854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.76 in
Total Volume Pumped 7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0.5		+/- 0.2	+/- 100
Last 5	12:18:16	3300.00	21.06	9.84	154.74	0.58	18.46	4.25	44.15
Last 5	12:23:16	3600.00	21.10	9.87	154.33	0.75	18.46	4.15	43.19
Last 5	12:28:16	3900.00	20.92	9.82	162.54	0.37	18.46	4.10	43.58
Last 5	12:33:16	4200.00	21.02	9.84	158.91	0.35	18.46	4.06	42.65
Last 5	12:38:17	4501.00	20.97	9.85	162.57	0.28	18.46	4.11	43.36
Variance 0			-0.18	-0.05	8.21			-0.05	0.39
Variance 1			0.09	0.02	-3.63			-0.04	-0.93
Variance 2			-0.04	0.01	3.66			0.05	0.71

Notes

Start time 11:23
Sample at 12:44; clear ~65 degrees

Grab Samples

MGWA-09
Low Flow

Product Name: Low-Flow System

Date: 2016-05-05 13:12:14

Project Information:

Operator Name N. Vrey
Company Name ERM
Project Name Plant McIntosh
Site Name Plant McIntosh AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444107
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Proactive Alexis V 2.0
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 53 ft

Pump placement from TOC 48 ft

Well Information:

Well ID MGWA-10
Well diameter 2 in
Well Total Depth 53.09 ft
Screen Length 10 ft
Depth to Water 16.03 ft

Pumping Information:

Final Pumping Rate 0.1 mL/min
Total System Volume 0.3265614 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 19.9 in
Total Volume Pumped 13.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:47:27	6899.95	23.25	5.92	92.18	0.29	18.20	1.65	123.19
Last 5	12:52:27	7199.96	23.88	5.92	94.97	0.73	18.20	2.02	122.66
Last 5	12:57:27	7499.90	23.06	5.91	94.26	--	--	1.80	125.39
Last 5	13:02:27	7799.90	23.92	5.92	95.07	--	--	1.64	123.58
Last 5	13:07:27	8099.90	23.26	5.94	93.56	--	--	1.83	124.33
Variance 0			-0.82	-0.01	-0.71			-0.22	2.73
Variance 1			0.86	0.01	0.82			-0.16	-1.81
Variance 2			-0.66	0.01	-1.51			0.18	0.74

Notes

Start time 1052
Start purge: 1052. Stop purge 1307. Sample: 1330

Grab Samples

Product Name: Low-Flow System

Date: 2016-05-06 09:54:29

Project Information:

Operator Name Will Virgo
Company Name ERM
Project Name Plant McIntosh AP
Site Name Plant McIntosh AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 365491
Turbidity Make/Model

Pump Information:

Pump Model/Type Proactive
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 60 ft

Pump placement from TOC 51 ft

Well Information:

Well ID MGWC-01
Well diameter 2 in
Well Total Depth 56.08 ft
Screen Length 10 ft
Depth to Water 35.42 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.6078054 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 11 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:31:09	5405.94	19.03	6.62	535.02	5.63	36.85	0.36	-35.06
Last 5	09:36:09	5705.94	19.41	6.63	537.97	5.73	36.85	0.35	-36.24
Last 5	09:41:09	6005.94	19.36	6.63	541.10	4.92	36.85	0.35	-36.66
Last 5	09:46:09	6305.94	19.78	6.64	542.16	4.79	36.85	0.35	-37.66
Last 5	09:51:09	6605.94	19.95	6.64	544.42	4.26	36.85	0.34	-38.19
Variance 0			-0.04	0.01	3.13			-0.00	-0.41
Variance 1			0.41	0.01	1.05			0.00	-1.01
Variance 2			0.17	-0.00	2.26			-0.01	-0.53

Notes

Well stable @ 0951

Grab Samples

MGWC-01
Sample time: 09:56

Product Name: Low-Flow System

Date: 2016-05-06 10:31:12

Project Information:

Operator Name Adria Reimer
Company Name ERM
Project Name Plant McIntosh AP
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444108
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Proactive Alexis V2.0 Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 38 ft

Pump placement from TOC 32 ft

Well Information:

Well ID MGWC-02
Well diameter 2 in
Well Total Depth 37.3 ft
Screen Length 10 ft
Depth to Water 19.44 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.5096101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 7.2 in
Total Volume Pumped 4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0.5		+/- 10%	+/- 100
Last 5	08:57:30	1499.99	17.50	7.41	824.73	2.76	20.04	0.38	8.61
Last 5	09:02:30	1799.99	17.80	7.41	824.51	2.32	20.04	0.43	6.08
Last 5	09:07:30	2100.00	17.94	7.41	822.86	4.03	20.00	0.48	8.29
Last 5	09:12:30	2399.99	17.86	7.41	825.19	2.58	20.04	0.48	5.88
Last 5	09:22:30	2999.99	17.99	7.41	819.26	--	--	0.50	5.36
Variance 0			0.14	0.00	-1.65			0.05	2.21
Variance 1			-0.09	-0.00	2.33			0.00	-2.41
Variance 2			0.13	0.00	-5.94			0.02	-0.51

Notes

Start at 8:32
Sample at 9:25

Grab Samples

Product Name: Low-Flow System

Date: 2016-05-06 08:59:20

Project Information:

Operator Name N. Vrey
Company Name ERM
Project Name Plant McIntosh
Site Name Plant McIntosh AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444107
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Proactive Alexis V 2.0
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 37.5 ft

Pump placement from TOC 33.5 ft

Well Information:

Well ID MGWC-03
Well diameter 2 in
Well Total Depth 38.74 ft
Screen Length 10 ft
Depth to Water 15.12 ft

Pumping Information:

Final Pumping Rate 0.1 mL/min
Total System Volume 0.2573784 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1 in
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	08:35:01	600.01	15.79	6.81	519.76	0.89	15.31	1.21	90.38
Last 5	08:40:01	900.01	16.38	6.82	513.99	1.02	15.31	0.74	63.15
Last 5	08:45:01	1200.01	16.74	6.84	514.25	0.91	15.32	0.60	49.44
Last 5	08:50:01	1500.01	16.92	6.84	511.99	0.93	15.33	0.55	45.28
Last 5	08:55:01	1800.01	17.00	6.85	512.96	0.61	15.33	0.48	40.38
Variance 0			0.36	0.01	0.27			-0.14	-13.70
Variance 1			0.18	0.00	-2.26			-0.05	-4.16
Variance 2			0.09	0.02	0.97			-0.07	-4.90

Notes

Start purging at 08:25
Start purge: 0825. Stop purge: 08:55. Sample: 0930

Grab Samples

Product Name: Low-Flow System

Date: 2016-05-05 18:57:28

Project Information:

Operator Name Adria Reimer
Company Name ERM
Project Name Plant McIntosh AP
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444108
Turbidity Make/Model

Pump Information:

Pump Model/Type Proactive Alexis V2.0 Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 50 ft

Pump placement from TOC 37 ft

Well Information:

Well ID MGWC-07
Well diameter 2 in
Well Total Depth 42.2 ft
Screen Length 10 ft
Depth to Water 17.89 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.5631711 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.72 in
Total Volume Pumped 3.3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 0.5		+/- 10%	+/- 100
Last 5	18:28:07	600.02	20.42	7.83	451.59	0.86	18.18	5.95	86.33
Last 5	18:33:07	900.02	20.29	7.79	450.60	0.69	18.20	5.70	86.23
Last 5	18:38:07	1200.02	20.30	7.86	452.72	0.71	18.20	5.92	84.47
Last 5	18:43:07	1500.02	20.35	7.79	453.36	0.76	18.20	5.87	83.86
Last 5	18:48:07	1800.02	20.31	7.81	453.28	0.67	18.20	5.87	83.05
Variance 0			0.01	0.07	2.13			0.22	-1.76
Variance 1			0.05	-0.07	0.63			-0.05	-0.61
Variance 2			-0.04	0.02	-0.08			0.01	-0.81

Notes

Sample at 1852. Field blank collected here.

Grab Samples

MGWC-07
Low flow

Product Name: Low-Flow System

Date: 2016-05-05 17:24:45

Project Information:

Operator Name Will Virgo
Company Name ERM
Project Name Plant McIntosh AP
Site Name Plant McIntosh AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 365491
Turbidity Make/Model

Pump Information:

Pump Model/Type GeoTech Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 52 ft

Pump placement from TOC 47 ft

Well Information:

Well ID MGWC-08
Well diameter 2 in
Well Total Depth 52.56 ft
Screen Length 10 ft
Depth to Water 28.09 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.572098 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 15 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		+/- 10%	+/- 100
Last 5	16:57:28	6610.98	21.91	5.65	351.54	3.11	28.15	0.77	89.82
Last 5	17:02:28	6911.01	21.81	5.65	369.62	2.95	28.25	0.55	77.10
Last 5	17:07:28	7210.94	21.90	5.89	420.04	2.98	28.15	0.29	44.02
Last 5	17:12:31	7513.93	22.58	5.96	438.94	2.94	28.15	0.30	34.22
Last 5	17:17:31	7813.93	21.77	5.96	423.89	--	--	0.24	28.59
Variance 0			0.09	0.24	50.42			-0.26	-33.08
Variance 1			0.67	0.07	18.90			0.01	-9.80
Variance 2			-0.80	0.00	-15.05			-0.06	-5.63

Notes

Purge rate decreased @15:27 from 250 to 100 ml/min. Issues with pump @ 16:28. Lots of trouble getting well stable.

Grab Samples

MGWC-08
Sample Time: 17:22

Product Name: Low-Flow System

Date: 2016-06-20 14:42:15

Project Information:

Operator Name Amanda Stormer
Company Name ERM
Project Name McIntosh CCR
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444108
Turbidity Make/Model Hanna 98703

Pump Information:

Pump Model/Type peristaltic
Tubing Type polyethylene
Tubing Diameter 0.25 in
Tubing Length 57 ft

Pump placement from TOC 57 ft

Well Information:

Well ID MGWA-5
Well diameter 2 in
Well Total Depth 62 ft
Screen Length 10 ft
Depth to Water 19.64 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.6402057 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 μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000
Last 5	14:19:31	300.08	26.88	7.61	245.55	5.25	19.93	0.60	-67.08
Last 5	14:24:31	600.02	26.85	7.61	242.01	4.46	20.16	0.47	-73.42
Last 5	14:29:31	900.02	26.24	7.60	242.85	4.30	20.24	0.36	-76.67
Last 5	14:34:31	1200.00	25.63	7.63	239.88	4.37	20.34	0.29	-77.54
Last 5	14:39:31	1500.00	25.08	7.63	243.32	3.93	20.35	0.28	-80.60
Variance 0			-0.62	-0.01	0.84			-0.11	-3.25
Variance 1			-0.60	0.02	-2.97			-0.08	-0.87
Variance 2			-0.55	-0.00	3.44			-0.01	-3.05

Notes

Grab Samples

MGWA-5
3 bottles: CCR and state; collected at 1445

Product Name: Low-Flow System

Date: 2016-06-21 08:45:54

Project Information:

Operator Name Myles Rogers
Company Name ERM
Project Name Plant McIntosh CCR
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444107
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 45 ft

Pump placement from TOC 37 ft

Well Information:

Well ID MGWA-6
Well diameter 2 in
Well Total Depth 42 ft
Screen Length 10 ft
Depth to Water 15.95 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.510854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.7 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	08:23:54	1200.02	21.64	7.19	571.57	999.00	16.29	0.05	-162.82
Last 5	08:28:54	1500.02	21.73	7.28	517.17	58.10	16.29	0.19	-110.58
Last 5	08:33:54	1800.02	21.81	7.27	515.21	5.07	16.29	0.19	-93.33
Last 5	08:38:54	2100.02	21.86	7.26	520.70	4.44	16.29	0.18	-93.56
Last 5	08:43:54	2400.02	21.92	7.27	522.26	2.67	16.29	0.17	-94.03
Variance 0			0.08	-0.01	-1.95			0.00	17.26
Variance 1			0.05	-0.00	5.48			-0.01	-0.23
Variance 2			0.06	0.00	1.56			-0.00	-0.48

Notes

Water went very cloudy and dark at 824. Parameters stable. Sampling at 848

Grab Samples

MGWA-6
Sampling at 848

Product Name: Low-Flow System

Date: 2016-06-20 14:49:10

Project Information:

Operator Name Will Virgo
Company Name ERM
Project Name Plant McIntosh CCR
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 55 ft

Pump placement from TOC 48 ft

Well Information:

Well ID MGWA-10
Well diameter 2 in
Well Total Depth 53 ft
Screen Length 10 ft
Depth to Water 15.49 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5854883 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 54.48 in
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000
Last 5	14:25:42	1500.02	23.11	5.83	89.33	1.18	19.37	1.63	152.84
Last 5	14:30:42	1800.01	23.03	5.84	91.51	1.21	19.62	1.51	148.92
Last 5	14:35:42	2100.04	23.01	5.84	92.36	1.01	19.80	1.45	147.43
Last 5	14:40:42	2400.02	22.73	5.84	93.63	1.07	19.93	1.39	142.98
Last 5	14:45:42	2700.01	23.12	5.84	93.57	1.05	20.03	1.34	142.62
Variance 0			-0.02	0.00	0.85			-0.06	-1.48
Variance 1			-0.27	0.00	1.27			-0.07	-4.45
Variance 2			0.38	0.00	-0.06			-0.04	-0.36

Notes

Purge started @ 1400. Purge rate 200 mL/min
Well parameters stable @ 1445. Well Sampled @ 1450. Sample rate 200mL/min

Grab Samples

MGWA-10
Sample Time: 1450

Product Name: Low-Flow System

Date: 2016-06-20 16:53:27

Project Information:

Operator Name Myles Rogers
Company Name ERM
Project Name Plant McIntosh CCR
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444107
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 58 ft

Pump placement from TOC 51 ft

Well Information:

Well ID MGWA-11
Well diameter 2 in
Well Total Depth 56 ft
Screen Length 10 ft
Depth to Water 18.20 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5588785 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 48 in
Total Volume Pumped 20 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 1000
Last 5	16:26:03	7501.99	24.02	7.84	283.78	6.33	18.60	1.06	-164.81
Last 5	16:31:03	7801.99	23.89	7.84	282.24	6.83	18.60	1.08	-165.07
Last 5	16:36:03	8101.96	23.84	7.85	281.09	4.59	18.60	1.10	-164.11
Last 5	16:41:03	8401.96	23.70	7.85	281.04	4.72	18.60	1.10	-164.37
Last 5	16:46:03	8701.96	24.02	7.85	281.73	4.17	18.60	1.11	-164.95
Variance 0			-0.06	0.01	-1.15			0.02	0.96
Variance 1			-0.13	0.00	-0.06			-0.00	-0.25
Variance 2			0.32	0.00	0.70			0.01	-0.58

Notes

Sampling at 1651. Dec purge rate to .1L at 1551

Grab Samples

HGWA-11
1651

Product Name: Low-Flow System

Date: 2016-06-21 12:30:20

Project Information:

Operator Name Will Virgo
Company Name ERM
Project Name Plant McIntosh CCR
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 60 ft

Pump placement from TOC 51 ft

Well Information:

Well ID MGWC-1
Well diameter 2 in
Well Total Depth 56 ft
Screen Length 10 ft
Depth to Water 35.26 ft

Pumping Information:

Final Pumping Rate 400 mL/min
Total System Volume 0.6078054 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 35.88 in
Total Volume Pumped 38 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000
Last 5	12:06:35	7800.00	23.41	6.95	697.33	5.10	38.25	0.08	11.71
Last 5	12:11:35	8100.00	23.36	6.97	699.85	5.09	38.25	0.07	12.52
Last 5	12:16:35	8400.01	23.36	6.97	708.44	3.69	38.25	0.07	12.66
Last 5	12:21:35	8700.00	22.98	6.98	706.10	4.12	38.25	0.08	13.15
Last 5	12:26:35	9000.00	23.22	6.99	716.95	3.07	38.25	0.07	12.33
Variance 0			0.00	0.01	8.59			-0.00	0.14
Variance 1			-0.38	0.01	-2.33			0.00	0.49
Variance 2			0.24	0.01	10.85			-0.01	-0.83

Notes

Purge started @ 0956 200 ml/min
Turbidity problems. Increased rate to 400 ml/min and turbidity cleared. Stable @ 1226. Sampled @ 1230 @ 200 ml/min

Grab Samples

MGQC-1
Sample Time: 1230

Product Name: Low-Flow System

Date: 2016-06-21 11:19:43

Project Information:

Operator Name Amanda Stormer
Company Name ERM
Project Name McIntosh CCR
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444108
Turbidity Make/Model Hanna 98703

Pump Information:

Pump Model/Type peristaltic
Tubing Type polyethylene
Tubing Diameter 0.25 in
Tubing Length 32 ft

Pump placement from TOC 32 ft

Well Information:

Well ID MGWC-2
Well diameter 2 in
Well Total Depth 37 ft
Screen Length 10 ft
Depth to Water 19.27 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.3988874 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 μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000
Last 5	10:56:58	1200.02	26.49	7.41	925.20	0.23	20.08	0.26	15.88
Last 5	11:01:58	1500.02	26.26	7.41	915.94	0.26	20.08	0.24	17.90
Last 5	11:06:58	1800.02	26.45	7.41	920.14	0.33	20.08	0.24	17.11
Last 5	11:11:58	2100.02	26.43	7.41	924.01	0.29	20.08	0.23	12.00
Last 5	11:16:58	2400.02	26.48	7.41	917.13	0.19	20.08	0.21	11.18
Variance 0			0.20	0.00	4.20			-0.01	-0.79
Variance 1			-0.02	-0.00	3.87			-0.01	-5.11
Variance 2			0.05	-0.00	-6.89			-0.02	-0.83

Notes

Grab Samples

MGWC-2
3 bottles: CCR; collected at 1125

Product Name: Low-Flow System

Date: 2016-06-21 10:56:56

Project Information:

Operator Name Myles Rogers
Company Name ERM
Project Name Plant McIntosh CCR
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444107
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 41 ft

Pump placement from TOC 34 ft

Well Information:

Well ID MGWC-3
Well diameter 2 in
Well Total Depth 39 ft
Screen Length 10 ft
Depth to Water 14.60 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4930004 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5.8 in
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 1000
Last 5	10:40:32	300.09	22.49	7.00	589.73	4.04	15.15	0.32	14.21
Last 5	10:45:32	600.02	22.00	6.97	594.50	2.88	15.16	0.23	11.15
Last 5	10:50:32	900.02	21.82	6.97	597.90	2.35	15.18	0.20	9.01
Last 5	10:55:32	1200.02	21.93	6.98	598.12	1.70	15.18	0.18	5.39
Last 5									
Variance 0			-0.49	-0.02	4.77			-0.09	-3.06
Variance 1			-0.18	0.00	3.40			-0.03	-2.14
Variance 2			0.11	0.01	0.22			-0.02	-3.62

Notes

All parameters stable Sample at 1100

Grab Samples

MGWC-3
Sample at 1100

Product Name: Low-Flow System

Date: 2016-06-21 09:14:33

Project Information:

Operator Name Amanda Stormer
Company Name ERM
Project Name McIntosh CCR
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444108
Turbidity Make/Model Hanna 98703

Pump Information:

Pump Model/Type peristaltic
Tubing Type polyethylene
Tubing Diameter 0.25 in
Tubing Length 37 ft

Pump placement from TOC 37 ft

Well Information:

Well ID MGWC-7
Well diameter 2 in
Well Total Depth 42 ft
Screen Length 10 ft
Depth to Water 17.51 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.4471511 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.14 in
Total Volume Pumped 0 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 1000
Last 5	08:49:24	900.02	24.15	7.22	520.49	0.41	17.90	0.84	72.97
Last 5	08:54:24	1200.02	24.10	7.21	519.78	0.25	17.91	0.76	36.65
Last 5	08:59:24	1500.02	23.88	7.22	519.70	0.54	17.92	0.74	30.58
Last 5	09:04:24	1800.01	23.98	7.22	521.17	0.32	17.92	0.69	11.16
Last 5	09:09:24	2100.00	24.15	7.20	521.60	0.35	17.94	0.63	-0.83
Variance 0			-0.22	0.01	-0.08			-0.02	-6.07
Variance 1			0.10	-0.00	1.47			-0.05	-19.42
Variance 2			0.18	-0.02	0.43			-0.06	-11.99

Notes

Grab Samples

MGWC-7
3 bottles: CCR; collected samples at 0920

Product Name: Low-Flow System

Date: 2016-06-21 08:53:42

Project Information:

Operator Name Will Virgo
Company Name ERM
Project Name Plant McIntosh CCR
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type GeoTech Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 55 ft

Pump placement from TOC 47 ft

Well Information:

Well ID MGWC-8
Well diameter 2 in
Well Total Depth 52 ft
Screen Length 10 ft
Depth to Water 27.74 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5854883 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.5 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 1000
Last 5	08:30:34	1800.02	22.20	5.38	351.08	4.99	28.03	0.21	136.86
Last 5	08:35:34	2100.02	22.40	6.00	452.63	2.75	28.03	0.22	67.54
Last 5	08:40:34	2400.02	22.58	5.98	442.32	1.98	28.03	0.31	66.47
Last 5	08:45:34	2700.02	22.65	6.00	443.45	1.75	28.03	0.26	63.91
Last 5	08:50:34	3000.02	22.73	6.00	446.95	1.70	28.03	0.24	61.63
Variance 0			0.18	-0.02	-10.31			0.09	-1.08
Variance 1			0.07	0.01	1.13			-0.05	-2.55
Variance 2			0.08	0.01	3.50			-0.02	-2.28

Notes

Purge started @ 0800. Purge rate:200 ml/min
PH and Cond spiked @ 0835, but stabilized around 6. Well stable @ 0850. Sampled @ 0855

Grab Samples

MGWC-8
Sample Time: 0855

Product Name: Low-Flow System

Date: 2016-06-21 12:54:05

Project Information:

Operator Name Myles Rogers
Company Name ERM
Project Name Plant McIntosh CCR
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444107
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Alexis peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 56 ft

Pump placement from TOC 48 ft

Well Information:

Well ID MGWC-12
Well diameter 2 in
Well Total Depth 53 ft
Screen Length 10 ft
Depth to Water 22.80 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5599517 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 11.52 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.2	+/- 5%	+/- 5		+/- 0.2	+/- 1000
Last 5	12:32:52	600.02	24.55	7.59	278.61	6.31	23.74	0.27	-170.43
Last 5	12:37:52	900.02	24.39	7.58	280.28	5.18	23.75	0.23	-170.88
Last 5	12:42:52	1200.02	25.19	7.61	268.76	4.62	23.76	0.19	-177.24
Last 5	12:47:52	1500.02	24.74	7.60	267.38	4.32	23.76	0.18	-177.08
Last 5	12:52:52	1800.02	25.17	7.61	262.06	4.81	23.76	0.17	-177.53
Variance 0			0.80	0.02	-11.52			-0.03	-6.36
Variance 1			-0.45	-0.00	-1.38			-0.01	0.15
Variance 2			0.43	0.00	-5.32			-0.01	-0.44

Notes

All parameters stable Sample at 1256

Grab Samples

MGWC-12
Sample at 1256

Product Name: Low-Flow System

Date: 2016-08-15 13:19:50

Project Information:

Operator Name Prine
Company Name ERM
Project Name McIntosh
Site Name Default Site
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model Hanna98703

Pump Information:

Pump Model/Type Alexia
Tubing Type poly
Tubing Diameter 0.17 in
Tubing Length 60 ft

Pump placement from TOC 53 ft

Well Information:

Well ID Mgwa-5
Well diameter 2 in
Well Total Depth 63.09 ft
Screen Length 10 ft
Depth to Water 21.25 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3578054 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 11.04 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	12:52:04	600.02	24.99	7.46	252.69	0.78	22.43	0.32	-100.69
Last 5	12:57:04	900.02	25.80	7.52	256.99	0.97	22.25	0.33	-118.00
Last 5	13:02:04	1200.02	25.73	7.52	261.78	0.39	22.15	0.30	-146.89
Last 5	13:07:04	1500.00	26.24	7.52	261.45	0.37	22.15	0.29	-152.14
Last 5	13:12:04	1800.00	25.69	7.54	258.34	0.43	22.17	0.28	-149.21
Variance 0			-0.07	0.00	4.79			-0.03	-28.89
Variance 1			0.51	0.01	-0.33			-0.01	-5.25
Variance 2			-0.55	0.01	-3.11			-0.01	2.93

Notes

Samples taken at 13:18

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-15 15:01:45

Project Information:

Operator Name Amanda Stormer
Company Name GPC
Project Name Plant McIntosh
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444107
Turbidity Make/Model Hanna HI 98703

Pump Information:

Pump Model/Type Pegasus peristaltic
Tubing Type poly
Tubing Diameter 0.175 in
Tubing Length 36.93 ft

Pump placement from TOC 36.93 ft

Well Information:

Well ID MGWA-6
Well diameter 2 in
Well Total Depth 41.93 ft
Screen Length 10 ft
Depth to Water 17.74 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2646729 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.12 in
Total Volume Pumped 4.95 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 20
Last 5	14:38:17	300.08	29.06	7.03	546.06	0.85	18.00	0.29	-90.31
Last 5	14:43:17	600.01	28.82	7.03	539.92	1.17	18.00	0.26	-88.84
Last 5	14:48:17	900.01	28.69	7.04	534.20	1.19	18.00	0.23	-88.30
Last 5	14:53:17	1200.01	28.47	7.04	531.99	1.08	18.00	0.22	-86.77
Last 5	14:58:17	1500.01	28.59	7.04	535.74	1.11	18.00	0.21	-87.51
Variance 0			-0.13	0.00	-5.72			-0.03	0.54
Variance 1			-0.23	0.00	-2.21			-0.02	1.53
Variance 2			0.12	-0.00	3.75			-0.00	-0.74

Notes

Grab Samples

MGWA-6
3 bottles; samples collected at 1305

Product Name: Low-Flow System

Date: 2016-08-15 12:57:13

Project Information:

Operator Name Amanda Stormer
Company Name GPC
Project Name Plant McIntosh
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444107
Turbidity Make/Model Hanna HI 98703

Pump Information:

Pump Model/Type Pegasus peristaltic
Tubing Type poly
Tubing Diameter 0.175 in
Tubing Length 48.09 ft

Pump placement from TOC 48.09 ft

Well Information:

Well ID MGWA-10
Well diameter 2 in
Well Total Depth 53.09 ft
Screen Length 10 ft
Depth to Water 17.62 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.3174579 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 20.88 in
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 20
Last 5	12:30:56	300.11	32.39	5.63	71.56	2.30	18.50	1.66	174.67
Last 5	12:35:56	600.02	31.00	5.62	75.98	0.95	18.77	1.65	169.60
Last 5	12:40:56	900.02	33.28	5.64	75.31	0.78	18.84	1.63	163.52
Last 5	12:45:56	1200.02	32.26	5.65	76.55	1.00	19.10	1.52	170.67
Last 5	12:50:56	1500.02	30.97	5.65	78.21	1.38	19.36	1.49	175.62
Variance 0			2.28	0.03	-0.67			-0.02	-6.08
Variance 1			-1.03	0.00	1.24			-0.11	7.15
Variance 2			-1.29	0.00	1.66			-0.03	4.95

Notes

Grab Samples

MGWA-10
3 bottles; samples collected at 1300

Product Name: Low-Flow System

Date: 2016-08-15 13:43:35

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name Georgia Power Company
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444108
Turbidity Make/Model HI 98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 60 ft

Pump placement from TOC 51 ft

Well Information:

Well ID MGWA-11
Well diameter 2 in
Well Total Depth 56 ft
Screen Length 10 ft
Depth to Water 20.25 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.3578054 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3 in
Total Volume Pumped 6.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	13:15:17	1200.02	30.33	7.52	287.47	3.60	20.47	0.36	-63.81
Last 5	13:20:17	1500.02	30.68	7.53	286.45	3.67	20.47	0.32	-69.71
Last 5	13:30:17	2100.02	31.41	7.52	289.01	4.18	20.47	0.26	-82.48
Last 5	13:35:17	2400.02	31.73	7.52	288.55	3.43	20.47	0.23	-86.80
Last 5	13:40:17	2700.02	31.62	7.52	286.06	4.99	20.47	0.21	-87.16
Variance 0			0.74	-0.01	2.56			-0.06	-12.78
Variance 1			0.32	-0.00	-0.46			-0.03	-4.32
Variance 2			-0.11	0.00	-2.49			-0.02	-0.36

Notes

All parameter stable. Sampled at 1345

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-16 10:20:46

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name Georgia Power Company
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444108
Turbidity Make/Model HI 98703

Pump Information:

Pump Model/Type GeoControl PRO
Tubing Type Duel Poly
Tubing Diameter .17 in
Tubing Length 58 ft

Pump placement from TOC 51 ft

Well Information:

Well ID MGWC-1
Well diameter 2 in
Well Total Depth 56.08 ft
Screen Length 10 ft
Depth to Water 36.35 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.4788785 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 12 in
Total Volume Pumped 13.375 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:55:42	1800.01	26.15	6.51	519.44	8.44	37.44	0.26	33.75
Last 5	10:00:42	2100.02	26.38	6.53	525.86	6.03	37.41	0.23	32.22
Last 5	10:05:43	2401.04	26.24	6.55	529.97	4.83	37.41	0.22	31.62
Last 5	10:10:43	2701.01	25.78	6.56	532.58	3.61	37.40	0.21	31.11
Last 5	10:15:49	3007.01	26.14	6.58	538.60	3.61	37.40	0.19	29.25
Variance 0			-0.15	0.02	4.11			-0.01	-0.60
Variance 1			-0.46	0.02	2.61			-0.01	-0.51
Variance 2			0.36	0.02	6.01			-0.02	-1.87

Notes

All Parameters Stable. Sampled @ 1020

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-16 11:59:48

Project Information:

Operator Name Prine
Company Name ERM
Project Name Plant McIntosh
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model Hanna HI 98703

Pump Information:

Pump Model/Type alexis
Tubing Type poly
Tubing Diameter 0.175 in
Tubing Length 40 ft

Pump placement from TOC 32 ft

Well Information:

Well ID MGWC-2
Well diameter 2 in
Well Total Depth 37.36 ft
Screen Length 10 ft
Depth to Water 19.95 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2791936 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 10.8 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 20
Last 5	11:35:16	900.02	24.89	7.34	942.82	6.66	21.03	0.26	-8.98
Last 5	11:40:16	1200.00	25.44	7.34	941.85	4.66	20.90	0.28	-6.55
Last 5	11:45:16	1500.00	25.83	7.33	953.01	3.87	20.85	0.26	-5.60
Last 5	11:50:16	1800.00	26.14	7.33	949.90	3.57	20.84	0.24	-3.79
Last 5	11:55:16	2100.00	25.53	7.33	939.58	3.57	20.85	0.28	0.80
Variance 0			0.39	-0.01	11.16			-0.02	0.95
Variance 1			0.31	-0.00	-3.11			-0.02	1.81
Variance 2			-0.61	-0.00	-10.31			0.03	4.59

Notes

Sample taken at 11:55

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-16 09:55:10

Project Information:

Operator Name Prine
Company Name Erm
Project Name Plant McIntosh
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model Hanna HI 98703

Pump Information:

Pump Model/Type alexis
Tubing Type poly
Tubing Diameter 0.175 in
Tubing Length 41 ft

Pump placement from TOC 8 ft

Well Information:

Well ID MGWC-3
Well diameter 2 in
Well Total Depth 38.74 ft
Screen Length 10 ft
Depth to Water 15.70 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2839234 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.68 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 20
Last 5	09:30:28	900.02	22.39	6.69	600.22	0.27	16.09	0.21	31.29
Last 5	09:35:28	1200.02	22.37	6.70	599.42	0.28	16.09	0.20	29.16
Last 5	09:40:28	1500.00	22.22	6.71	600.35	0.26	16.09	0.19	29.00
Last 5	09:45:28	1800.00	22.41	6.72	603.88	0.29	16.10	0.18	26.85
Last 5	09:50:28	2100.00	22.34	6.73	605.14	0.39	16.09	0.17	25.92
Variance 0			-0.15	0.01	0.93			-0.01	-0.16
Variance 1			0.19	0.01	3.53			-0.01	-2.16
Variance 2			-0.08	0.01	1.26			-0.01	-0.93

Notes

Taken sample at 09:55

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-15 15:06:32

Project Information:

Operator Name Prine
Company Name ERM
Project Name McIntosh
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model Hanna HI 98703

Pump Information:

Pump Model/Type Alexis
Tubing Type poly
Tubing Diameter 0.17 in
Tubing Length 45 ft

Pump placement from TOC 8 ft

Well Information:

Well ID MGWC-7
Well diameter 2 in
Well Total Depth 42.29 ft
Screen Length 10 ft
Depth to Water 19.05 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.290854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6.24 in
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 3%	+/- 10		+/- 0.3	+/- 10
Last 5	14:50:52	300.03	27.69	7.07	520.50	3.20	19.55	0.43	-69.62
Last 5	14:55:52	600.02	26.21	7.04	532.24	2.54	19.59	0.28	-68.08
Last 5	15:00:52	900.02	26.01	7.04	533.25	2.26	19.57	0.23	-66.81
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-1.48	-0.03	11.75			-0.16	1.54
Variance 2			-0.20	-0.00	1.00			-0.05	1.27

Notes

Took samples at 15:05

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-15 15:39:46

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name Georgia Power Company
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444108
Turbidity Make/Model HI 98703

Pump Information:

Pump Model/Type GeoControl PRO
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 57 ft

Pump placement from TOC 47 ft

Well Information:

Well ID MGWC-8
Well diameter 2 in
Well Total Depth 52.56 ft
Screen Length 10 ft
Depth to Water 28.47 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4694151 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	15:10:42	600.02	27.48	5.28	337.00	2.78	28.70	0.40	89.85
Last 5	15:15:42	900.02	26.65	5.29	335.85	1.90	28.70	0.30	89.22
Last 5	15:25:42	1500.02	26.33	5.36	339.09	1.55	28.70	0.25	86.53
Last 5	15:30:42	1800.02	26.19	5.36	339.06	0.74	28.70	0.23	86.17
Last 5	15:35:42	2100.02	26.31	5.37	338.01	0.93	28.70	0.20	84.73
Variance 0			-0.32	0.06	3.24			-0.05	-2.69
Variance 1			-0.14	0.00	-0.03			-0.02	-0.36
Variance 2			0.12	0.01	-1.05			-0.03	-1.44

Notes

All Parameter Stable. Sampled at 1540

Grab Samples

Product Name: Low-Flow System

Date: 2016-08-16 12:50:45

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name Georgia Power Company
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444108
Turbidity Make/Model HI 98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 60 ft

Pump placement from TOC 48 ft

Well Information:

Well ID MGWC-12
Well diameter 2 in
Well Total Depth 53 ft
Screen Length 10 ft
Depth to Water 24.11 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3578054 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 8 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:26:24	1200.02	24.69	7.07	305.41	1.92	24.82	0.24	-114.65
Last 5	12:31:24	1500.02	24.45	7.10	303.14	1.33	24.82	0.19	-112.58
Last 5	12:36:24	1800.02	24.15	7.13	296.87	0.83	24.82	0.18	-115.18
Last 5	12:41:24	2100.02	24.65	7.15	291.61	1.39	24.82	0.16	-120.86
Last 5	12:46:24	2400.02	24.33	7.17	283.99	1.48	24.83	0.16	-118.77
Variance 0			-0.30	0.02	-6.27			-0.01	-2.60
Variance 1			0.50	0.03	-5.26			-0.02	-5.68
Variance 2			-0.32	0.01	-7.62			-0.00	2.10

Notes

All Parameters Stable. Sampled at 1250

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-28 13:29:40

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Ash Pond
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 465016
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 65 ft

Pump placement from TOC 57 ft

Well Information:

Well ID MGWA-5
Well diameter 2 in
Well Total Depth 62.10 ft
Screen Length 10 ft
Depth to Water 21.85 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3801225 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 13.8 in
Total Volume Pumped 3.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 100
Last 5	13:18:08	180.08	24.01	7.39	279.34	0.23	22.88	0.30	-20.18
Last 5	13:21:08	360.02	23.97	7.41	282.11	0.27	22.95	0.24	-33.15
Last 5	13:24:08	540.02	23.89	7.43	285.24	0.37	22.98	0.23	-44.50
Last 5	13:27:08	720.02	23.74	7.45	283.90	0.35	23.00	0.21	-59.72
Last 5									
Variance 0			-0.04	0.03	2.77			-0.05	-12.97
Variance 1			-0.08	0.02	3.14			-0.02	-11.36
Variance 2			-0.16	0.02	-1.34			-0.02	-15.21

Notes

Started purge at 1309
No issues. Sample rate 200 mL/min. Clear, no odor.

Grab Samples

MGWA-5
Sample time 1332

Product Name: Low-Flow System

Date: 2016-09-28 14:06:36

Project Information:

Operator Name M. Rogers
Company Name ERM
Project Name Plant McIntosh
Site Name Plant McIntosh AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 457516
Turbidity Make/Model LaMotte

Pump Information:

Pump Model/Type Alexis peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 36 ft

Well Information:

Well ID MGWA-6
Well diameter 2 in
Well Total Depth 42.15 ft
Screen Length 13.23 ft
Depth to Water 18.25 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.540854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.3 in
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:45:03	1500.02	26.41	7.09	562.24	5.21	18.47	1.05	-50.24
Last 5	13:50:03	1800.02	26.05	7.09	562.20	4.53	18.47	1.08	-49.23
Last 5	13:55:03	2100.02	25.27	7.08	556.45	3.21	18.47	0.81	-48.15
Last 5	14:00:03	2400.02	25.24	7.09	555.50	2.33	18.47	0.81	-48.88
Last 5	14:05:03	2700.56	25.11	7.09	551.39	2.60	18.48	0.77	-49.44
Variance 0			-0.77	-0.01	-5.75			-0.27	1.08
Variance 1			-0.04	0.00	-0.95			0.00	-0.73
Variance 2			-0.12	0.00	-4.11			-0.04	-0.56

Notes

All parameters stable. Sampling at 200ml/min

Grab Samples

MGWA-6
Sampling at 1408

Product Name: Low-Flow System

Date: 2016-09-28 11:49:23

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Ash Pond
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 465016
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 60 ft

Pump placement from TOC 51.5 ft

Well Information:

Well ID MGWA-10
Well diameter 2 in
Well Total Depth 56.60 ft
Screen Length 10 ft
Depth to Water 18.43 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3578054 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 48 in
Total Volume Pumped 6.3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 100
Last 5	11:32:20	540.02	23.07	5.69	75.88	0.76	21.82	1.42	69.36
Last 5	11:35:20	720.02	23.16	5.69	76.81	0.49	22.10	1.44	68.76
Last 5	11:38:20	900.02	23.45	5.69	78.36	0.56	22.30	1.47	68.83
Last 5	11:41:20	1080.02	23.74	5.71	79.64	0.36	22.36	1.43	68.57
Last 5	11:44:20	1260.02	23.69	5.72	79.48	0.42	22.43	1.41	67.87
Variance 0			0.28	0.00	1.55			0.04	0.08
Variance 1			0.30	0.02	1.28			-0.04	-0.26
Variance 2			-0.06	0.01	-0.16			-0.03	-0.70

Notes

Start purge at 1117
Reduced purge rate to 200 mL/min because WL dropping so quickly. No other issues. Sample rate 200 mL/min. Extra bottle for Rad lab QC here.
Clear, no odor.

Grab Samples
MGWA-10
Sample time 1150



Product Name: Low-Flow System

Date: 2016-09-28 12:07:45

Project Information:

Operator Name M. Rogers
Company Name ERM
Project Name Plant McIntosh
Site Name Plant McIntosh AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 457516
Turbidity Make/Model LaMotte

Pump Information:

Pump Model/Type Alexis peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 55 ft

Pump placement from TOC 48 ft

Well Information:

Well ID MGWA-11
Well diameter 2 in
Well Total Depth 53 ft
Screen Length 13.39 ft
Depth to Water 20.96 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5854883 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.5 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:45:48	300.13	24.26	5.41	0.78	4.18	21.05	8.23	109.36
Last 5	11:50:48	600.02	25.89	7.54	287.13	2.99	21.26	1.19	-102.32
Last 5	11:55:48	900.02	24.69	7.63	293.96	2.36	21.30	0.64	-87.67
Last 5	12:00:48	1200.02	24.00	7.65	294.91	2.82	21.31	0.70	-84.90
Last 5	12:05:48	1499.94	23.83	7.66	294.36	1.60	21.31	0.67	-84.37
Variance 0			-1.20	0.08	6.83			-0.55	14.65
Variance 1			-0.70	0.02	0.95			0.06	2.76
Variance 2			-0.16	0.01	-0.55			-0.03	0.53

Notes

All parameters stable. Sampling at 200ml/min

Grab Samples

MGWA-11
Sampling at 1210

Product Name: Low-Flow System

Date: 2016-09-28 15:26:11

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Ash Pond
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 465016
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 61 ft

Pump placement from TOC 51 ft

Well Information:

Well ID MGWC-1
Well diameter 2 in
Well Total Depth 56.08 ft
Screen Length 10 ft
Depth to Water 36.45 ft

Pumping Information:

Final Pumping Rate 175 mL/min
Total System Volume 0.3622688 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 11.4 in
Total Volume Pumped 8.575 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 100
Last 5	15:10:54	1440.02	24.76	6.67	519.67	6.36	37.38	0.22	-27.36
Last 5	15:13:54	1620.02	24.33	6.68	517.75	5.27	37.38	0.22	-26.14
Last 5	15:16:54	1800.02	24.56	6.69	526.51	4.97	37.40	0.21	-27.10
Last 5	15:19:54	1980.02	24.62	6.68	527.26	4.57	37.40	0.21	-27.15
Last 5	15:22:54	2160.02	23.92	6.70	526.62	4.23	37.40	0.19	-26.58
Variance 0			0.23	0.01	8.75			-0.01	-0.96
Variance 1			0.05	-0.00	0.75			0.00	-0.05
Variance 2			-0.70	0.01	-0.64			-0.02	0.57

Notes

Started purge at 1433
No issues. Clear, no odor. Dup-1 taken here. Sample rate 175 mL/min.

Grab Samples

MGWC-1
Sample time 1527
Dup-1
Sample time 1527

Product Name: Low-Flow System

Date: 2016-09-29 08:46:34

Project Information:

Operator Name M. Rogers
Company Name ERM
Project Name Plant McIntosh
Site Name Plant McIntosh AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 457516
Turbidity Make/Model LaMotte

Pump Information:

Pump Model/Type Alexis peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 40 ft

Pump placement from TOC 32 ft

Well Information:

Well ID MGWC-2
Well diameter 2 in
Well Total Depth 37.26 ft
Screen Length 10 ft
Depth to Water 19.85 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5185369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 16.2 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	08:24:48	1200.02	22.53	7.42	937.47	7.84	21.17	0.74	8.52
Last 5	08:29:48	1500.02	22.52	7.42	936.86	5.39	21.20	0.72	7.14
Last 5	08:34:48	1799.94	22.58	7.42	935.33	4.29	21.20	0.73	4.66
Last 5	08:39:49	2100.94	22.58	7.43	938.31	3.33	21.20	0.74	3.24
Last 5	08:44:49	2400.94	22.62	7.42	939.09	3.81	21.20	0.69	1.10
Variance 0			0.06	0.00	-1.53			0.01	-2.48
Variance 1			0.01	0.00	2.99			0.02	-1.42
Variance 2			0.04	-0.00	0.77			-0.05	-2.14

Notes

All parameters stable. Sampling at 200ml/min

Grab Samples

MGWC-2
Sampling at 0849

Product Name: Low-Flow System

Date: 2016-09-29 08:25:57

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name Plant McIntosh
Site Name McIntosh AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364452
Turbidity Make/Model LaMotte

Pump Information:

Pump Model/Type Alexis
Tubing Type Idpe
Tubing Diameter 0.175 in
Tubing Length 42 ft

Pump placement from TOC 34 ft

Well Information:

Well ID MGWC-3
Well diameter 2 in
Well Total Depth 39.12 ft
Screen Length 10 ft
Depth to Water 15.85 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4886532 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6.84 in
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	08:08:47	300.04	21.72	6.68	554.10	0.65	16.37	0.37	96.97
Last 5	08:13:47	600.02	21.72	6.75	553.09	0.55	16.40	0.30	82.91
Last 5	08:18:47	900.02	21.46	6.79	554.92	0.49	16.41	0.28	74.37
Last 5	08:23:47	1200.02	21.46	6.81	557.98	0.20	16.42	0.27	68.02
Last 5									
Variance 0			-0.01	0.07	-1.02			-0.08	-14.06
Variance 1			-0.25	0.04	1.83			-0.02	-8.54
Variance 2			-0.00	0.02	3.07			-0.00	-6.35

Notes

Sample taken at 828.

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-28 15:35:22

Project Information:

Operator Name M. Rogers
Company Name ERM
Project Name Plant McIntosh
Site Name Plant McIntosh AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 457516
Turbidity Make/Model LaMotte

Pump Information:

Pump Model/Type Alexis peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 45 ft

Pump placement from TOC 35.44 ft

Well Information:

Well ID MGWC-7
Well diameter 2 in
Well Total Depth 42.23 ft
Screen Length 13.59 ft
Depth to Water 19.42 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.540854 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.8 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 100	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	15:14:03	300.03	26.47	7.01	517.52	8.29	19.67	0.55	-33.38
Last 5	15:19:03	600.02	25.60	7.00	522.91	6.22	19.90	0.45	-36.91
Last 5	15:24:03	900.02	25.33	7.00	520.37	4.50	19.90	0.40	-37.78
Last 5	15:29:03	1200.02	25.28	7.00	521.45	4.86	19.90	0.38	-37.92
Last 5	15:34:03	1500.02	25.35	7.00	522.56	4.13	19.90	0.34	-38.68
Variance 0			-0.27	0.00	-2.54			-0.05	-0.87
Variance 1			-0.05	0.00	1.08			-0.02	-0.14
Variance 2			0.07	0.00	1.12			-0.04	-0.75

Notes

all parameters stable. Sampling at 200ml/min

Grab Samples

MGWC-7
Sampling at 1538

Product Name: Low-Flow System

Date: 2016-09-28 15:43:16

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name Plant McIntosh
Site Name McIntosh AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 364452
Turbidity Make/Model LaMotte

Pump Information:

Pump Model/Type Alexis
Tubing Type Idpe
Tubing Diameter 0.175 in
Tubing Length 56 ft

Pump placement from TOC 48 ft

Well Information:

Well ID MGWC-8
Well diameter 2 in
Well Total Depth 52.79 ft
Screen Length 10 ft
Depth to Water 28.7 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.554871 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.92 in
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	15:25:06	300.05	25.69	5.73	329.78	0.92	28.86	1.36	72.50
Last 5	15:30:06	600.02	25.88	5.64	333.33	0.84	28.86	0.59	80.91
Last 5	15:35:06	900.02	25.64	5.69	331.62	0.41	28.86	0.63	84.38
Last 5	15:40:06	1200.02	26.53	5.66	330.45	0.50	28.87	0.69	86.67
Last 5									
Variance 0			0.19	-0.10	3.55			-0.77	8.41
Variance 1			-0.24	0.06	-1.72			0.04	3.47
Variance 2			0.89	-0.03	-1.17			0.06	2.30

Notes

Sample taken at 1545.

Grab Samples

Product Name: Low-Flow System

Date: 2016-09-29 08:21:45

Project Information:

Operator Name Tracy Wardell
Company Name ERM
Project Name Ash Pond
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 465016
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 57 ft

Pump placement from TOC 51 ft

Well Information:

Well ID MGWC-12
Well diameter 2 in
Well Total Depth 55.72 ft
Screen Length 10 ft
Depth to Water 24.57 ft

Pumping Information:

Final Pumping Rate 225 mL/min
Total System Volume 0.3444151 L
Calculated Sample Rate 180 sec
Stabilization Drawdown 10.68 in
Total Volume Pumped 3.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 100
Last 5	08:10:15	180.08	21.11	6.93	315.15	1.39	25.37	0.28	-58.27
Last 5	08:13:15	360.02	21.03	6.95	316.63	1.20	25.45	0.23	-62.27
Last 5	08:16:15	540.02	21.03	6.96	314.74	0.99	25.46	0.20	-65.30
Last 5	08:19:15	720.02	21.02	6.97	311.71	0.77	25.46	0.18	-68.36
Last 5									
Variance 0			-0.07	0.02	1.48			-0.05	-4.00
Variance 1			-0.00	0.01	-1.89			-0.03	-3.03
Variance 2			-0.01	0.01	-3.03			-0.02	-3.05

Notes

Started purge at 0803
Sample rate also 225mL/min. Clear, no odor, no issues.

Grab Samples

MGWC-12
Sample time 0824

Product Name: Low-Flow System

Date: 2016-11-16 10:42:45

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC Plant McIntosh
Site Name Plant McIntosh LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model Hannah

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type Idpe
Tubing Diameter 0.175 in
Tubing Length 65 ft

Pump placement from TOC 57 ft

Well Information:

Well ID MGWA-5
Well diameter 2 in
Well Total Depth 62.1 ft
Screen Length 10 ft
Depth to Water 21.05 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.6474395 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 13.08 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 50
Last 5	10:19:28	300.08	20.41	7.08	251.10	1.27	21.99	0.33	-163.39
Last 5	10:24:28	600.02	20.74	7.22	253.04	0.26	22.10	0.25	-167.91
Last 5	10:29:28	900.02	20.84	7.30	260.94	0.38	22.13	0.21	-169.45
Last 5	10:34:28	1199.97	20.77	7.36	265.35	0.51	22.14	0.18	-169.20
Last 5	10:39:28	1499.97	20.73	7.39	266.06	0.49	22.14	0.17	-168.08
Variance 0			0.10	0.08	7.90			-0.04	-1.55
Variance 1			-0.07	0.06	4.40			-0.03	0.25
Variance 2			-0.04	0.03	0.71			-0.01	1.12

Notes

Weather is sunny. Temperature is 60F. Sample at 1045.

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-16 10:32:39

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh-Ash Pond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444108
Turbidity Make/Model HI 98703

AP CJ 11/21/16

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 50 ft

Pump placement from TOC 37 ft

Well Information:

Well ID ~~GWC-6~~ MGWA-6
Well diameter 2 in
Well Total Depth 42.15 ft
Screen Length 10 ft
Depth to Water 17.92 ft

CJ 11/21/16

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.3131711 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4 in
Total Volume Pumped 3.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:15:09	300.05	21.91	7.55	557.59	3.25	18.34	0.26	-91.94
Last 5	10:20:09	600.03	21.38	7.59	561.62	2.65	18.34	0.17	-93.43
Last 5	10:25:09	900.03	21.24	7.60	563.99	2.13	18.34	0.14	-94.89
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.53	0.04	4.03			-0.08	-1.49
Variance 2			-0.14	0.01	2.37			-0.04	-1.46

Notes

1010 start purge@250mL/min; 1025 all parameters stable; 1030 sampled@250mL/min. Sunny 60F, calm

Grab Samples

~~GWC-6~~ MGWA-6
Sampled at 1030; .5gal, 1L, 250mL

CJ 11/21/16

Product Name: Low-Flow System

Date: 2016-11-16 08:54:09

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh - Ash Pond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hannah

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 68.00 ft

Pump placement from TOC 48.00 ft

Well Information:

Well ID MGWA-10
Well diameter 2 in
Well Total Depth 53.00 ft
Screen Length 10 ft
Depth to Water 16.90 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.3935128 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 37.8 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 20
Last 5	08:31:25	900.03	18.71	5.58	71.65	0.78	19.12	1.89	68.21
Last 5	08:36:25	1200.02	18.77	5.60	73.90	0.48	19.55	1.74	62.33
Last 5	08:41:25	1500.03	18.66	5.61	73.99	0.56	19.85	1.67	60.53
Last 5	08:46:25	1800.02	18.46	5.63	75.48	0.49	20.06	1.70	56.39
Last 5	08:51:25	2100.02	17.99	5.65	77.84	0.50	20.05	1.81	54.00
Variance 0			-0.12	0.01	0.09			-0.06	-1.81
Variance 1			-0.20	0.02	1.49			0.03	-4.14
Variance 2			-0.47	0.02	2.36			0.11	-2.39

Notes

Weather: 41°F Sunny

Grab Samples

MGWA-10

Sample Time 0855

Product Name: Low-Flow System

Date: 2016-11-16 10:29:07

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh - Ash Pond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hannah

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 71.60 ft

Pump placement from TOC 51.60 ft

Well Information:

Well ID MGWA-11
Well diameter 2 in
Well Total Depth 56.60 ft
Screen Length 10 ft
Depth to Water 19.92 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4095811 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.32 in
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 20
Last 5	10:11:34	300.06	19.59	7.40	249.43	4.40	20.25	0.50	-144.95
Last 5	10:16:34	600.02	20.79	7.49	281.33	3.19	20.28	0.30	-129.54
Last 5	10:21:34	900.02	20.98	7.51	291.30	2.33	20.28	0.28	-114.16
Last 5	10:26:34	1200.02	20.85	7.51	291.68	1.60	20.28	0.24	-105.68
Last 5									
Variance 0			1.20	0.09	31.90			-0.20	15.41
Variance 1			0.18	0.02	9.97			-0.02	15.38
Variance 2			-0.13	0.01	0.38			-0.04	8.48

Notes

Weather: 59°F sunny

Grab Samples

MGWA-11

Sample Time 1030

Product Name: Low-Flow System

Date: 2016-11-16 13:24:08

Project Information:

Operator Name T.Wardell
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh - AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444107
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Geotechnical portable bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 60 ft

Pump placement from TOC 51 ft

Well Information:

Well ID MGWC-1
Well diameter 2 in
Well Total Depth 56.08 ft
Screen Length 10 ft
Depth to Water 36.21 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4578054 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 14.28 in
Total Volume Pumped 8.2 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:02:05	899.97	21.37	6.58	499.72	6.37	37.38	0.24	-52.79
Last 5	13:07:05	1199.97	21.38	6.61	506.86	5.29	37.40	0.22	-51.58
Last 5	13:12:05	1499.98	21.38	6.62	513.39	4.81	37.41	0.21	-49.87
Last 5	13:17:05	1799.98	21.39	6.64	517.69	4.39	37.41	0.20	-47.79
Last 5	13:22:05	2099.97	21.41	6.66	521.02	4.40	37.40	0.20	-47.21
Variance 0			-0.00	0.02	6.53			-0.01	1.71
Variance 1			0.01	0.02	4.30			-0.01	2.08
Variance 2			0.02	0.01	3.33			-0.00	0.58

Notes

Started purge at 12:41
Sample rate 200 mL/min. Clear, no odor. Sunny, 73.

Grab Samples

MGWC-1
Sample time 1327

Product Name: Low-Flow System

Date: 2016-11-16 12:02:42

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC Plant McIntosh
Site Name Plant McIntosh LF3
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model Hannah

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type Idpe
Tubing Diameter 0.175 in
Tubing Length 42 ft

Pump placement from TOC 34 ft

Well Information:

Well ID MGWC-3
Well diameter 2 in
Well Total Depth 39.12 ft
Screen Length 10 ft
Depth to Water 15.57 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5386532 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5.04 in
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 50
Last 5	11:45:42	300.08	20.22	6.65	530.49	0.49	15.96	0.27	25.07
Last 5	11:50:42	600.02	20.26	6.65	542.62	0.90	15.99	0.21	21.34
Last 5	11:55:42	900.05	20.19	6.68	546.36	0.42	15.99	0.17	19.59
Last 5	12:00:42	1200.02	20.22	6.69	546.77	0.27	15.99	0.15	18.40
Last 5									
Variance 0			0.04	0.00	12.14			-0.06	-3.73
Variance 1			-0.07	0.03	3.74			-0.04	-1.75
Variance 2			0.03	0.01	0.40			-0.02	-1.19

Notes

Weather is sunny. Temperature is 60F. Sample taken at 1205.

Grab Samples

Product Name: Low-Flow System

Date: 2016-11-16 11:49:00

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh - Ash Pond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hannah

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 57.23 ft

Pump placement from TOC 37.23 ft

Well Information:

Well ID MGWC-7
Well diameter 2 in
Well Total Depth 42.23 ft
Screen Length 10 ft
Depth to Water 19.23 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3454417 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6.84 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 20
Last 5	11:26:38	300.11	21.51	6.71	511.76	2.15	19.74	0.95	-7.20
Last 5	11:31:37	599.89	21.57	6.60	518.35	1.47	19.80	1.40	-21.19
Last 5	11:36:38	899.94	21.82	6.66	513.13	0.79	19.80	0.73	-28.45
Last 5	11:41:37	1199.90	21.84	6.69	494.25	0.95	19.80	0.74	-31.36
Last 5	11:46:37	1499.89	21.64	6.73	510.67	0.82	19.80	0.77	-34.66
Variance 0			0.25	0.06	-5.23			-0.67	-7.26
Variance 1			0.01	0.03	-18.88			0.01	-2.90
Variance 2			-0.19	0.03	16.42			0.03	-3.30

Notes

Weather: 64°F Sunny

Grab Samples

MGWC-7

Sample Time 1150

Product Name: Low-Flow System

Date: 2016-11-16 11:30:39

Project Information:

Operator Name T.Wardell
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh - LF4
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444107
Turbidity Make/Model Hanna

Pump Information:

Pump Model/Type Geotechnical portable bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 55 ft

Pump placement from TOC 48 ft

Well Information:

Well ID MGWC-8
Well diameter 2 in
Well Total Depth 52.79 ft
Screen Length 10 ft
Depth to Water 28.64 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.4354883 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.44 in
Total Volume Pumped 3.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:07:45	599.96	22.45	5.29	350.29	8.50	28.76	0.40	64.43
Last 5	11:12:45	899.96	22.04	5.30	354.75	6.32	28.76	0.37	65.88
Last 5	11:17:45	1199.96	21.99	5.30	355.59	4.90	28.76	0.35	72.71
Last 5	11:22:45	1499.96	21.94	5.31	354.24	4.70	28.76	0.32	77.47
Last 5	11:27:45	1799.96	21.91	5.33	353.43	4.06	28.76	0.31	81.86
Variance 0			-0.06	-0.01	0.83			-0.03	6.83
Variance 1			-0.05	0.02	-1.35			-0.02	4.76
Variance 2			-0.03	0.02	-0.81			-0.01	4.39

Notes

Started purge at 10:53
Sample rate 150mL/min. Sunny, 69. Water - clear, no odor.

Grab Samples

MGWC-8
Sample time 1132

Product Name: Low-Flow System

Date: 2016-11-16 13:37:25

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name GPC Plant McIntosh
Site Name McIntosh - Ash Pond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hannah

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 70.72 ft

Pump placement from TOC 50.72 ft

Well Information:

Well ID MGWC-12
Well diameter 2 in
Well Total Depth 55.72 ft
Screen Length 10 ft
Depth to Water 23.63 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4056533 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 11.04 in
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 20
Last 5	13:20:52	300.04	21.30	6.95	287.20	1.14	24.35	0.54	-116.71
Last 5	13:25:52	600.02	20.53	6.96	291.88	0.93	24.54	0.40	-113.48
Last 5	13:30:52	900.02	20.52	7.03	280.52	0.57	24.55	0.35	-115.80
Last 5									
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			-0.78	0.02	4.67			-0.14	3.23
Variance 2			-0.00	0.07	-11.36			-0.05	-2.31

Notes

Weather: 65°F Sunny

Grab Samples

MGWC-12

Sample Time 1335

Product Name: Low-Flow System

Date: 2017-01-17 11:12:29

Project Information:

Operator Name M. Rogers
Company Name ERM
Project Name GPC - Plant McIntosh
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 LDPE
Tubing Diameter 0.17 in
Tubing Length 65 ft

Pump placement from TOC 2 ft

Well Information:

Well ID MGWA-5
Well diameter 2 in
Well Total Depth 62.10 ft
Screen Length 10 ft
Depth to Water 20.60 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5001225 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 12.72 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:49:23	600.02	20.97	7.22	261.43	0.25	21.63	0.33	-86.15
Last 5	10:54:23	900.02	20.93	7.21	263.17	0.27	21.64	0.28	-96.64
Last 5	10:59:23	1200.02	21.11	7.21	265.75	0.11	21.64	0.25	-104.10
Last 5	11:04:23	1500.02	21.19	7.23	264.00	0.08	21.66	0.22	-108.70
Last 5	11:09:23	1800.02	21.15	7.23	264.74	0.43	21.66	0.21	-111.22
Variance 0			0.18	0.00	2.58			-0.02	-7.46
Variance 1			0.09	0.01	-1.75			-0.03	-4.60
Variance 2			-0.04	0.01	0.73			-0.02	-2.53

Notes

D.O not green but under 5. Parameters stable

Grab Samples

MGWA-5
Sampling at 1114

Product Name: Low-Flow System

Date: 2017-01-17 12:41:18

Project Information:

Operator Name M. Rogers
Company Name ERM
Project Name GPC - Plant McIntosh
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 LDPE
Tubing Diameter 0.17 in
Tubing Length 42 ft

Pump placement from TOC 37 ft

Well Information:

Well ID MGWA-6
Well diameter 2 in
Well Total Depth 42.15 ft
Screen Length 10 ft
Depth to Water 17.52 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3974638 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.88 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:20:38	300.02	22.57	6.97	525.83	1.19	17.63	0.33	-34.29
Last 5	12:25:38	600.02	22.39	6.98	526.05	0.92	17.76	0.24	-36.39
Last 5	12:30:38	900.02	22.40	6.98	524.43	0.77	17.76	0.20	-36.88
Last 5	12:35:38	1200.02	22.40	6.99	522.46	0.71	17.76	0.19	-36.99
Last 5									
Variance 0			-0.18	0.02	0.21			-0.09	-2.10
Variance 1			0.01	0.00	-1.62			-0.03	-0.49
Variance 2			0.00	0.01	-1.97			-0.02	-0.11

Notes

Parameters stable

Grab Samples

MGWA-6
Sampling at 1243

Product Name: Low-Flow System

Date: 2017-01-16 15:28:29

Project Information:

Operator Name M. Rogers
Company Name ERM
Project Name GPC - Plant McIntosh
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 LDPE
Tubing Diameter 0.17 in
Tubing Length 53 ft

Pump placement from TOC 2 ft

Well Information:

Well ID MGWA-10
Well diameter 2 in
Well Total Depth 53.00 ft
Screen Length 10 ft
Depth to Water 16.44 ft

Pumping Information:

Final Pumping Rate 0.2 mL/min
Total System Volume 0.4465614 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 36.96 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:00:52	1500.01	21.91	5.67	69.37	0.39	18.99	2.17	103.67
Last 5	15:05:52	1800.01	21.91	5.63	68.69	0.72	19.00	1.84	104.74
Last 5	15:15:52	2400.02	21.82	5.57	67.11	1.03	19.28	1.67	108.05
Last 5	15:20:52	2700.02	21.73	5.55	66.59	0.99	19.40	1.58	109.16
Last 5	15:25:52	3000.01	21.56	5.52	66.28	0.86	19.43	1.49	110.06
Variance 0			-0.09	-0.06	-1.58			-0.17	3.31
Variance 1			-0.09	-0.02	-0.53			-0.08	1.11
Variance 2			-0.18	-0.03	-0.30			-0.10	0.90

Notes

DO<5.0 parameters stable

Grab Samples

MGWA-10
Sampling at 1530

Product Name: Low-Flow System

Date: 2017-01-17 09:46:04

Project Information:

Operator Name M. Rogers
Company Name ERM
Project Name GPC - Plant McIntosh
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 LDPE
Tubing Diameter 0.17 in
Tubing Length 60 ft

Pump placement from TOC 2 ft

Well Information:

Well ID MGWA-11
Well diameter 2 in
Well Total Depth 56.60 ft
Screen Length 10 ft
Depth to Water 19.39 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4778054 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.24 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:22:15	1200.02	19.92	7.48	274.59	0.23	19.64	0.28	-17.05
Last 5	09:27:15	1500.01	19.97	7.50	274.82	1.09	19.65	0.25	-26.04
Last 5	09:32:15	1800.01	20.44	7.52	274.07	0.12	19.65	0.23	-35.90
Last 5	09:37:15	2100.00	20.62	7.53	273.47	0.35	19.65	0.21	-44.96
Last 5	09:42:15	2400.07	20.77	7.52	273.11	0.24	19.66	0.20	-52.71
Variance 0			0.46	0.01	-0.75			-0.02	-9.86
Variance 1			0.18	0.01	-0.60			-0.02	-9.06
Variance 2			0.15	-0.00	-0.36			-0.01	-7.75

Notes

ORP AND DO not green and not stabilization criteria

Grab Samples

MGWA-11
Sampling at 0947

Product Name: Low-Flow System

Date: 2017-01-19 09:24:05

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type GeoTech Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 61.08 ft

Pump placement from TOC 51.08 ft

Well Information:

Well ID MGWC-1
Well diameter 2 in
Well Total Depth 56.08 ft
Screen Length 10 ft
Depth to Water 36.37 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.5376258 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 11.88 in
Total Volume Pumped 7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	09:00:01	2400.03	20.14	6.75	583.45	9.22	37.36	0.12	-10.72
Last 5	09:05:01	2700.03	20.09	6.76	590.00	6.79	37.36	0.12	-10.05
Last 5	09:10:01	2999.97	20.11	6.78	597.38	4.87	37.36	0.11	-9.68
Last 5	09:15:01	3300.02	20.15	6.80	603.84	4.32	37.36	0.11	-9.59
Last 5	09:20:01	3599.98	20.13	6.81	612.78	3.99	37.36	0.10	-9.51
Variance 0			0.02	0.02	7.38			-0.01	0.36
Variance 1			0.04	0.02	6.46			0.00	0.09
Variance 2			-0.02	0.01	8.93			-0.01	0.08

Notes

Weather: 57F partly cloudy. Purge time: 0820/0920.

Grab Samples

MGWC-1
Sample Time: 0925

Product Name: Low-Flow System

Date: 2017-01-18 09:03:41

Project Information:

Operator Name M. Rogers
Company Name ERM
Project Name GPC - Plant McIntosh
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 LDPE
Tubing Diameter 0.17 in
Tubing Length 38 ft

Pump placement from TOC 32 ft

Well Information:

Well ID MGWC-2
Well diameter 2 in
Well Total Depth 37.26 ft
Screen Length 10 ft
Depth to Water 19.57 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3796101 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 12.6 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	08:41:13	300.09	18.78	7.63	764.55	3.68	20.40	0.45	80.55
Last 5	08:46:13	600.02	19.46	7.50	752.32	4.81	20.48	0.29	57.54
Last 5	08:51:13	900.02	19.67	7.48	750.10	4.44	20.59	0.22	50.07
Last 5	08:56:13	1200.02	19.77	7.49	752.16	2.80	20.61	0.21	45.64
Last 5	09:01:13	1500.01	19.93	7.49	749.49	3.06	20.62	0.19	41.31
Variance 0			0.21	-0.01	-2.22			-0.07	-7.47
Variance 1			0.10	0.00	2.06			-0.01	-4.42
Variance 2			0.15	0.00	-2.67			-0.02	-4.34

Notes

Parameters stable

Grab Samples

MGWC-2
Sampling at 0905

Product Name: Low-Flow System

Date: 2017-01-17 15:56:08

Project Information:

Operator Name M. Rogers
Company Name ERM
Project Name GPC - Plant McIntosh
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 LDPE
Tubing Diameter 0.17 in
Tubing Length 39 ft

Pump placement from TOC 2 ft

Well Information:

Well ID MGWC-3
Well diameter 2 in
Well Total Depth 39.12 ft
Screen Length 10 ft
Depth to Water 15.42 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3840735 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 4.92 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:35:07	900.02	20.60	6.77	557.62	5.57	--	0.21	86.87
Last 5	15:40:07	1200.02	20.57	6.74	557.15	5.27	15.82	0.19	79.46
Last 5	15:45:07	1500.02	20.60	6.72	554.83	4.44	15.83	0.18	74.87
Last 5	15:50:07	1800.02	20.53	6.73	556.30	3.07	15.83	0.17	70.19
Last 5	15:55:07	2100.02	20.50	6.77	555.70	2.31	15.83	0.16	67.12
Variance 0			0.02	-0.02	-2.32			-0.01	-4.59
Variance 1			-0.06	0.01	1.47			-0.02	-4.68
Variance 2			-0.03	0.04	-0.60			-0.00	-3.07

Notes

Parameters stable

Grab Samples

MGWC-3
Sampling at 1558

Product Name: Low-Flow System

Date: 2017-01-17 13:06:00

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name GPC-Plant McIntosh
Site Name AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 444575
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 47.23 ft

Pump placement from TOC 37.23 ft

Well Information:

Well ID MGWC-7
Well diameter 2 in
Well Total Depth 42.23 ft
Screen Length 10 ft
Depth to Water 19.13 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3008075 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6.84 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	12:40:50	900.02	22.05	6.44	507.70	0.62	19.73	1.29	4.35
Last 5	12:45:50	1200.02	22.09	6.50	513.98	0.52	19.71	0.94	-2.44
Last 5	12:50:50	1500.02	22.26	6.53	515.64	0.93	19.70	0.32	-5.90
Last 5	12:55:50	1800.02	22.27	6.57	514.50	0.41	19.70	0.23	-9.62
Last 5	13:00:50	2100.02	22.36	6.61	514.83	0.43	19.70	0.26	-13.60
Variance 0			0.17	0.03	1.66			-0.62	-3.46
Variance 1			0.01	0.04	-1.14			-0.09	-3.72
Variance 2			0.09	0.04	0.34			0.03	-3.98

Notes

Weather: 72F Sunny. Purge time 1225/1300

Grab Samples

MGWC-7
Sample Time: 1305

Product Name: Low-Flow System

Date: 2017-01-17 14:12:15

Project Information:

Operator Name M. Rogers
Company Name ERM
Project Name GPC - Plant McIntosh
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 LDPE
Tubing Diameter 0.17 in
Tubing Length 52 ft

Pump placement from TOC 2 ft

Well Information:

Well ID MGWC-8
Well diameter 2 in
Well Total Depth 52.79 ft
Screen Length 10 ft
Depth to Water 28.83 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.442098 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.2 in
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:50:03	600.02	23.84	5.39	374.81	1.02	28.92	0.72	153.90
Last 5	13:55:03	900.02	23.61	5.32	374.78	2.97	28.94	0.48	171.72
Last 5	14:00:03	1200.02	23.37	5.27	374.13	0.97	28.94	0.41	184.56
Last 5	14:05:03	1500.00	23.52	5.25	374.66	0.21	28.93	0.45	194.92
Last 5	14:10:03	1800.00	23.58	5.24	373.78	0.20	28.93	0.43	203.64
Variance 0			-0.24	-0.05	-0.65			-0.07	12.84
Variance 1			0.15	-0.02	0.53			0.05	10.36
Variance 2			0.05	-0.01	-0.88			-0.02	8.72

Notes

May have to switch to submersible pump because of water level
ORP and D.O not green. Parameters stable.

Grab Samples

MGWC-8
Sampling at 1414

Product Name: Low-Flow System

Date: 2017-01-18 10:44:32

Project Information:

Operator Name M. Rogers
Company Name ERM
Project Name GPC - Plant McIntosh
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 Perstaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 55 ft

Pump placement from TOC 2 ft

Well Information:

Well ID MGWC-12
Well diameter 2 in
Well Total Depth 55.72 ft
Screen Length 10 ft
Depth to Water 23.62 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.4554883 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 7.92 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:21:49	1200.01	19.31	6.78	242.06	0.41	24.27	0.25	-88.19
Last 5	10:26:49	1500.01	19.38	6.87	234.73	0.36	24.27	0.22	-93.20
Last 5	10:31:49	1800.02	19.37	6.94	229.00	0.55	24.27	0.21	-96.31
Last 5	10:36:49	2100.01	19.37	7.00	225.27	0.23	24.28	0.20	-99.83
Last 5	10:41:49	2400.01	19.46	7.01	224.16	0.20	24.28	0.19	-100.15
Variance 0			-0.00	0.07	-5.73			-0.01	-3.11
Variance 1			-0.00	0.06	-3.73			-0.01	-3.52
Variance 2			0.09	0.02	-1.11			-0.01	-0.32

Notes

May need to decrease purge rate to .100L/min
Parameters stable. Taking 2nd Radium bottle from here

Grab Samples

MGWC-12
Sampling at 1047

Product Name: Low-Flow System

Date: 2017-03-02 10:44:33

Project Information:

Operator Name M. Burch
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 463072
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 67 ft

Pump placement from TOC 57 ft

Well Information:

Well ID MGWA-5
Well diameter 2 in
Well Total Depth 62.10 ft
Screen Length 10 ft
Depth to Water 20.10 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.6390493 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 16.44 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 3%	+/- 5%		+/- 0.2	+/- 10
Last 5	10:26:48	600.06	20.55	7.51	264.85	0.02	21.45	0.19	-115.12
Last 5	10:31:47	899.99	20.37	7.53	265.41	0.06	21.45	0.16	-116.65
Last 5	10:36:47	1199.98	20.85	7.54	266.61	0.22	21.46	0.15	-118.61
Last 5	10:41:47	1499.99	20.77	7.55	265.38	0.20	21.47	0.13	-119.68
Last 5									
Variance 0			-0.18	0.02	0.55			-0.03	-1.53
Variance 1			0.48	0.01	1.21			-0.02	-1.96
Variance 2			-0.08	0.01	-1.24			-0.01	-1.08

Notes

Started purging at 200mL/min at 1017
Stopped purging at 1042 at 200mL/min

Grab Samples

MGWA-5
Grabbed Sample at 1045 at 200mL/min

Product Name: Low-Flow System

Date: 2017-03-02 10:51:43

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
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 LDPE
Tubing Diameter 0.17 in
Tubing Length 55 ft

Pump placement from TOC 37 ft

Well Information:

Well ID MGWA-6
Well diameter 2 in
Well Total Depth 42.15 ft
Screen Length 10 ft
Depth to Water 16.90 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.3354883 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5 in
Total Volume Pumped 6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	10:20:21	300.09	20.30	7.01	554.72	1.70	17.30	0.28	41.11
Last 5	10:25:21	600.02	20.21	6.97	548.37	1.63	17.30	0.19	31.53
Last 5	10:30:21	900.02	20.13	6.96	543.98	0.99	17.30	0.15	26.48
Last 5	10:35:21	1200.02	20.36	6.96	545.03	0.73	17.28	0.14	22.75
Last 5	10:40:21	1500.02	20.60	6.95	541.65	0.59	17.27	0.12	19.41
Variance 0			-0.08	-0.00	-4.39			-0.04	-5.04
Variance 1			0.24	-0.00	1.05			-0.02	-3.73
Variance 2			0.24	-0.00	-3.38			-0.01	-3.34

Notes

1015 start purge at 250mL/min; 1040 all parameters stable; 1045 sampled at 250mL/min. 60F Partly Cloudy and Windy.

Grab Samples

Product Name: Low-Flow System

Date: 2017-03-02 09:27:12

Project Information:

Operator Name M. Burch
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 463072
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 58 ft

Pump placement from TOC 48 ft

Well Information:

Well ID MGWA-10
Well diameter 2 in
Well Total Depth 53 ft
Screen Length 10 ft
Depth to Water 15.73 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5988786 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 46.92 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 3%	+/- 5%		+/- 0.2	+/- 10
Last 5	09:02:02	600.03	18.92	5.61	73.04	0.51	18.55	1.50	96.73
Last 5	09:07:02	900.03	18.72	5.58	70.64	0.36	19.30	1.54	89.96
Last 5	09:12:02	1200.03	18.72	5.56	68.78	0.37	19.50	1.63	85.95
Last 5	09:17:02	1500.03	18.74	5.55	67.98	0.53	19.62	1.66	83.54
Last 5	09:22:02	1800.00	18.83	5.53	67.09	0.31	19.64	1.66	82.25
Variance 0			0.00	-0.02	-1.86			0.09	-4.01
Variance 1			0.02	-0.01	-0.80			0.03	-2.41
Variance 2			0.09	-0.01	-0.89			-0.00	-1.29

Notes

Started purging at 200mL/min at 0852
Stopped purging at 0922 at 200mL/min Weather: cloudy and wet with a sprinkle of rain here and there

Grab Samples

MGWA-10
Grabbed Sample at 0930 at 200mL/min

Product Name: Low-Flow System

Date: 2017-03-02 12:13:41

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449622
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED Bladder
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 63 ft

Pump placement from TOC 51 ft

Well Information:

Well ID MGWC-1
Well diameter 2 in
Well Total Depth 56.08 ft
Screen Length 10 ft
Depth to Water 36.21 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.4961957 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 20 in
Total Volume Pumped 7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	11:35:27	600.02	21.69	6.67	516.06	3.64	37.53	0.89	33.89
Last 5	11:40:27	900.02	21.73	6.69	534.61	2.23	37.60	0.63	31.60
Last 5	11:45:27	1200.02	21.85	6.72	542.14	2.12	37.62	0.50	29.75
Last 5	11:50:27	1500.02	21.48	6.74	551.82	1.56	37.75	0.35	28.89
Last 5	11:55:27	1800.02	21.20	6.75	557.12	1.28	37.87	0.14	27.73
Variance 0			0.11	0.03	7.53			-0.13	-1.85
Variance 1			-0.37	0.02	9.67			-0.15	-0.86
Variance 2			-0.28	0.01	5.30			-0.21	-1.16

Notes

1125 start pump at 250mL/min; 1155 all parameters stable; 1200 sampled at 250mL/min. 63F Partly Cloudy and Windy

Grab Samples

MGWC-1
Sampled at 1200

Product Name: Low-Flow System

Date: 2017-03-02 13:25:53

Project Information:

Operator Name M. Burch
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 463072
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 42 ft

Pump placement from TOC 32 ft

Well Information:

Well ID MGWC-2
Well diameter 2 in
Well Total Depth 37.26 ft
Screen Length 10 ft
Depth to Water 19.47 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5274637 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 16.68 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 3%	+/- 5%		+/- 0.2	+/- 10
Last 5	13:03:32	300.12	22.32	7.37	868.62	3.41	20.65	0.18	49.84
Last 5	13:08:32	600.03	22.21	7.38	868.11	3.42	20.85	0.16	40.85
Last 5	13:13:32	900.03	22.13	7.38	870.04	3.03	20.86	0.15	34.89
Last 5	13:18:32	1200.03	22.28	7.37	866.00	1.80	20.86	0.14	31.15
Last 5	13:23:32	1499.99	22.17	7.37	867.65	2.25	20.86	0.13	27.90
Variance 0			-0.08	0.00	1.93			-0.02	-5.96
Variance 1			0.15	-0.00	-4.04			-0.01	-3.74
Variance 2			-0.11	-0.00	1.65			-0.01	-3.25

Notes

Started purging at 200mL/min at 1259
Stopped purging at 1324 at 200mL/min

Grab Samples

MGWC-2
Grabbed Sample at 1330 at 200mL/min

Product Name: Low-Flow System

Date: 2017-03-02 12:30:18

Project Information:

Operator Name T. Payne
Company Name ERM
Project Name GPC - Plant McIntosh
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 0.17 in
Tubing Length 42 ft

Pump placement from TOC 34 ft

Well Information:

Well ID MGWC-3
Well diameter 2 in
Well Total Depth 39.12 ft
Screen Length 10 ft
Depth to Water 15.18 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5274637 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 5.16 in
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 5		+/- 2	+/- 100
Last 5	12:12:44	300.06	19.95	6.73	547.20	0.19	15.59	0.93	-4.63
Last 5	12:17:44	600.04	20.17	6.76	554.94	0.14	15.61	0.77	-2.63
Last 5	12:22:44	900.02	19.96	6.78	563.98	1.92	15.61	0.75	-1.12
Last 5	12:27:44	1200.02	19.81	6.79	565.72	0.15	15.61	0.67	0.25
Last 5									
Variance 0			0.22	0.03	7.75			-0.16	2.00
Variance 1			-0.20	0.02	9.04			-0.03	1.51
Variance 2			-0.15	0.01	1.74			-0.08	1.38

Notes

Begin purging at 1207. Well stable at 1227. Sample at 1235. Sample rate 0.2L/min. Weather is sunny.

Grab Samples

MGWC-3
1235



GROUNDWATER SAMPLING LOG SHEET

Client:	GPC	Project No.:	Sampling Date: 3/2/2017
Site:	Plant McIntosh	Location:	AP
Well ID:	MGWC-7	Pump Type/Model:	Alexis Peri.
Total Depth (ft):	42.23	Tubing Material:	LDPE
Depth to Water (ft):	18.79	Pump Intake Depth (ft):	37
Well Diameter (in):	2	Start/Stop Purge Time:	1026/1056
Well Volume (gal) = 0.041d ² h:		Purge Rate (mL/min) ¹ :	0.2
Well Volume (L) = gal * 3.785:		Total Purge Volume (L):	6
d = well diameter (inches) h = length of water column (feet)		Purge Method:	Low-Flow
Well Type:	Flush <input type="checkbox"/> Stick Up <input type="checkbox"/>	Sampling Method ² :	Pump Discharge
Well Lock:	Yes <input type="checkbox"/> No <input type="checkbox"/>	QA/QC Collected? Yes <input type="checkbox"/>	QA/QC I.D. Dup-1 <input type="checkbox"/>
Well Cap Condition:	Good <input type="checkbox"/> Replace <input type="checkbox"/>	All sample containers requiring chemical preservation properly preserved prior to demob from well? ³ Yes	
Well Tag Present:	Yes <input type="checkbox"/> No <input type="checkbox"/>		

Time	Temp. (°C)	Spec. Cond. (µS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/min)	Purged Volume (L)	H ₂ O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1031	19.37	502.5	0.43	6.29	89.9	0.38	200	1.0	19.29	
1036	19.86	503.4	0.27	6.38	79.1	1.16	230	2.0	19.3	
1041	20.13	508.2	0.19	6.47	67.5	0.55	200	3.0	19.3	
1046	20.17	510.9	0.17	6.54	56.2	0.88	200	4.0	19.3	
1051	20.33	510.7	0.15	6.58	47.8	0.60	200	5.0	19.3	
1056	20.38	512.7	0.13	6.62	41	0.29	200	6.0	19.3	Parameters stabilized
										Sampled at 1102
										TD = 42.25
Stabilizing Criteria^{4,5}		+/- 5%	0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater) ⁹	+/- 0.1 SU		< 5 NTUs	> 100 mL < 250 mL	> 3L	< 0.33 ft^{6,7}	

(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 3/2/2017.

Product Name: Low-Flow System

Date: 2017-03-02 12:01:57

Project Information:

Operator Name M. Burch
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 463072
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 57 ft

Pump placement from TOC 47 ft

Well Information:

Well ID MGWC-8
Well diameter 2 in
Well Total Depth 52.79 ft
Screen Length 10 ft
Depth to Water 28.73 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5944151 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.92 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 3%	+/- 5%		+/- 0.2	+/- 10
Last 5	11:40:09	300.07	20.89	5.20	398.47	0.03	28.89	0.54	101.95
Last 5	11:45:09	600.03	21.00	5.18	393.96	0.00	28.89	0.38	103.10
Last 5	11:50:09	900.03	21.06	5.20	392.02	0.11	28.89	0.24	101.46
Last 5	11:55:09	1200.03	20.92	5.20	393.46	0.12	28.89	0.21	100.74
Last 5	12:00:09	1500.03	20.95	5.21	396.26	0.03	28.89	0.20	97.99
Variance 0			0.06	0.03	-1.93			-0.14	-1.64
Variance 1			-0.13	-0.00	1.43			-0.03	-0.71
Variance 2			0.03	0.01	2.80			-0.00	-2.75

Notes

Started purging at 200mL/min at 1135
Stopped purging at 1200 @200mL/min

Grab Samples

MGWC-8
Grabbed Sample at 1205 at 200mL/min

Product Name: Low-Flow System

Date: 2017-03-02 13:34:50

Project Information:

Operator Name Markevious Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
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 LDPE
Tubing Diameter 0.17 in
Tubing Length 65 ft

Pump placement from TOC 50 ft

Well Information:

Well ID MGWC-12
Well diameter 2 in
Well Total Depth 55.73 ft
Screen Length 10 ft
Depth to Water 23.12 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.3801225 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 11 in
Total Volume Pumped 6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 1	+/- 0.1	+/- 5%	+/- 10		+/- 0.2	+/- 100
Last 5	13:05:06	300.07	20.57	6.98	284.69	1.21	23.85	0.43	12.02
Last 5	13:10:06	600.01	20.19	6.87	281.72	0.67	23.96	0.22	-8.87
Last 5	13:15:06	900.01	20.06	6.95	266.52	0.43	24.00	0.18	-19.26
Last 5	13:20:06	1200.01	19.60	7.01	263.35	0.59	24.00	0.16	-28.92
Last 5	13:25:06	1500.00	19.50	7.02	261.86	0.52	24.01	0.15	-36.32
Variance 0			-0.14	0.08	-15.20			-0.04	-10.39
Variance 1			-0.46	0.06	-3.16			-0.02	-9.66
Variance 2			-0.09	0.01	-1.50			-0.01	-7.40

Notes

1300 start purge at 250mL/min; 1325 all parameters stable; 1330 sampled at 250mL/min. 65F Partly Cloudy and Windy

Grab Samples

MGWC-12
Sampled at 1330

Product Name: Low-Flow System

Date: 2017-07-13 13:42:46

Project Information:

Operator Name A. Ellis
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name 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 56 ft

Pump placement from TOC 51 ft

Well Information:

Well ID MW-11
Well diameter 2 in
Well Total Depth 56.61 ft
Screen Length 10 ft
Depth to Water 18.03 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.5899516 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.24 in
Total Volume Pumped 3.75 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:20:37	300.09	26.44	7.71	238.19	7.06	18.30	0.38	39.79
Last 5	13:25:37	600.02	25.88	7.72	237.56	5.99	18.30	0.33	31.45
Last 5	13:30:37	900.02	24.82	7.72	239.91	4.31	18.30	0.32	26.19
Last 5	13:35:37	1200.02	24.60	7.72	239.34	4.38	18.30	0.30	20.43
Last 5	13:40:37	1500.02	24.64	7.72	240.93	4.41	18.30	0.27	15.44
Variance 0			-1.06	-0.01	2.35			-0.01	-5.26
Variance 1			-0.22	0.00	-0.57			-0.02	-5.76
Variance 2			0.04	0.00	1.59			-0.03	-4.99

Notes

Sampled at 1340; DUP-1

Grab Samples

Product Name: Low-Flow System

Date: 2017-07-13 15:20:10

Project Information:

Operator Name A. Ellis
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name 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 55 ft

Pump placement from TOC 49 ft

Well Information:

Well ID MW-12
Well diameter 2 in
Well Total Depth 53.72 ft
Screen Length 10 ft
Depth to Water 22.67 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.5854883 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 8.28 in
Total Volume Pumped 5.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:58:45	899.91	23.74	6.94	266.88	6.52	23.36	0.21	-32.36
Last 5	15:03:45	1199.92	23.84	7.02	262.38	4.95	23.36	0.19	-42.28
Last 5	15:08:45	1499.91	23.80	7.07	259.56	3.88	23.36	0.18	-49.34
Last 5	15:13:45	1799.91	23.75	7.12	255.70	2.82	23.36	0.17	-54.64
Last 5	15:18:45	2099.91	23.71	7.17	254.36	2.13	23.36	0.17	-59.32
Variance 0			-0.04	0.05	-2.81			-0.00	-7.06
Variance 1			-0.04	0.05	-3.86			-0.01	-5.30
Variance 2			-0.04	0.04	-1.34			-0.00	-4.68

Notes

Sampled at 1518; FB-1; FERB-1

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-10 10:53:36

Project Information:

Operator Name H. Beough
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 47 ft

Pump placement from TOC 37 ft

Well Information:

Well ID MGWA-6
Well diameter 2 in
Well Total Depth 42.15 ft
Screen Length 10 ft
Depth to Water 16.78 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2997809 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.96 in
Total Volume Pumped 6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:28:04	300.05	25.11	7.15	552.75	4.38	17.10	0.19	32.84
Last 5	10:33:04	600.03	24.62	7.24	551.14	2.19	17.11	0.13	19.03
Last 5	10:38:04	899.97	24.41	7.24	553.00	1.84	17.11	0.10	14.11
Last 5	10:43:04	1199.97	24.34	7.27	555.28	1.43	17.11	0.09	11.70
Last 5	10:48:04	1499.97	24.27	7.27	552.17	1.65	17.11	0.09	7.25
Variance 0			-0.20	0.00	1.86			-0.02	-4.92
Variance 1			-0.07	0.02	2.28			-0.01	-2.41
Variance 2			-0.07	0.00	-3.10			0.00	-4.45

Notes

MGWA-6 sample Time: 1051. Purge rate: 250 mL/min. Purge Time: 1051

Grab Samples

MGWA-6
Sample Time: 1051

Product Name: Low-Flow System

Date: 2017-10-10 10:16:10

Project Information:

Operator Name V. Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model HANNA HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 63 ft

Pump placement from TOC 48 ft

Well Information:

Well ID MGWA-10
Well diameter 2 in
Well Total Depth 53 ft
Screen Length 10 ft
Depth to Water 15.69 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3711957 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 40.2 in
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:53:04	1500.03	24.65	5.53	64.67	0.39	18.37	1.51	170.68
Last 5	09:58:04	1800.03	24.91	5.53	65.11	0.40	18.64	1.50	165.28
Last 5	10:03:04	2100.02	24.89	5.51	65.00	0.33	18.80	1.50	167.64
Last 5	10:08:04	2399.99	24.97	5.52	65.22	0.30	18.97	1.50	162.79
Last 5	10:13:04	2700.00	25.19	5.51	65.32	0.22	19.04	1.50	162.31
Variance 0			-0.03	-0.02	-0.11			-0.00	2.37
Variance 1			0.08	0.01	0.22			0.00	-4.86
Variance 2			0.22	-0.00	0.10			0.00	-0.48

Notes

Purge time: 0928/1013. Parameters stable at 1013. MGWA-10 sampled at 1015.

Grab Samples

MGWA-10
1015

Product Name: Low-Flow System

Date: 2017-10-10 11:31:29

Project Information:

Operator Name V. Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model HANNA HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 66.6 ft

Pump placement from TOC 51.6 ft

Well Information:

Well ID MGWA-11
Well diameter 2 in
Well Total Depth 56.6 ft
Screen Length 10 ft
Depth to Water 18.44 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.387264 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.28 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:09:04	900.02	26.06	7.19	286.12	0.20	18.63	0.42	-110.59
Last 5	11:14:04	1200.03	25.74	7.30	288.45	0.19	18.63	0.44	-110.52
Last 5	11:19:04	1500.03	25.51	7.36	289.74	0.12	18.63	0.33	-109.66
Last 5	11:24:04	1800.02	25.37	7.40	287.57	0.17	18.63	0.31	-109.55
Last 5	11:29:04	2100.03	25.28	7.42	286.93	0.21	18.63	0.33	-110.13
Variance 0			-0.23	0.06	1.28			-0.11	0.86
Variance 1			-0.14	0.04	-2.17			-0.02	0.11
Variance 2			-0.09	0.02	-0.63			0.02	-0.58

Notes

Purge time: 1054/1129. Parameters stable at 1129. MGWA-11 sampled at 1135.

Grab Samples

MGWA-11
1135

Product Name: Low-Flow System

Date: 2017-10-10 14:24:47

Project Information:

Operator Name Pat Harold
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model HANNA HI9873

Pump Information:

Pump Model/Type ALEXIS PERI
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 61.08 ft

Pump placement from TOC 51.08 ft

Well Information:

Well ID MGWC-1
Well diameter 2 in
Well Total Depth 56.08 ft
Screen Length 10 ft
Depth to Water 35.82 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3626259 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 15.48 in
Total Volume Pumped 23 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:50:05	5402.04	23.70	6.96	573.64	1.85	37.09	1.51	-26.46
Last 5	13:55:05	5702.04	23.63	6.96	578.90	1.72	37.10	1.42	-23.93
Last 5	14:05:05	6302.07	24.47	6.98	606.78	2.71	37.10	1.25	-22.08
Last 5	14:10:05	6602.04	23.79	6.98	609.83	2.22	37.10	1.18	-18.42
Last 5	14:15:05	6902.01	23.59	6.99	613.40	1.06	37.11	1.13	-16.74
Variance 0			0.84	0.02	27.88			-0.17	1.85
Variance 1			-0.68	0.00	3.05			-0.07	3.66
Variance 2			-0.21	0.00	3.56			-0.05	1.69

Notes

Purging started @ 1220/ stopped 1415. Parameters stabilized @ 1415. Sample MGWC-1 taken @ 1420.

Grab Samples

MGWC-1

Sample taken @ 1420 w/ 200ml/min

Product Name: Low-Flow System

Date: 2017-10-10 12:56:36

Project Information:

Operator Name V. Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 450141
Turbidity Make/Model HANNA HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 47 ft

Pump placement from TOC 32 ft

Well Information:

Well ID MGWC-2
Well diameter 2 in
Well Total Depth 37.26 ft
Screen Length 10 ft
Depth to Water 19.38 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2997809 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 10.2 in
Total Volume Pumped 4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 2	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	12:34:01	900.03	25.74	7.29	824.57	5.11	20.17	0.26	10.30
Last 5	12:39:01	1200.02	25.99	7.29	816.00	3.54	20.12	0.26	7.11
Last 5	12:44:01	1500.03	25.84	7.29	818.27	1.72	20.09	0.23	8.76
Last 5	12:49:01	1800.03	25.70	7.29	817.93	1.84	20.12	0.22	7.48
Last 5	12:54:01	2100.02	25.84	7.29	818.29	0.91	20.12	0.20	5.06
Variance 0			-0.15	-0.00	2.27			-0.03	1.64
Variance 1			-0.14	0.00	-0.34			-0.01	-1.28
Variance 2			0.14	0.00	0.36			-0.02	-2.42

Notes

Purge time: 1219/1254. Parameters stable at 1254. MGWC-2 sampled at 1300.

Grab Samples

MGWC-2
1300

Product Name: Low-Flow System

Date: 2017-10-10 12:12:53

Project Information:

Operator Name H. Beaugh
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 44 ft

Pump placement from TOC 34 ft

Well Information:

Well ID MGWC-3
Well diameter 2 in
Well Total Depth 39.12 ft
Screen Length 10 ft
Depth to Water 14.85 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2863906 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6.6 in
Total Volume Pumped 6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:44:26	300.05	22.80	6.94	572.37	1.40	15.33	0.21	38.88
Last 5	11:49:26	600.03	22.40	6.96	579.56	1.61	15.38	0.14	34.68
Last 5	11:54:26	900.03	22.40	7.00	582.88	0.71	15.38	0.11	32.72
Last 5	11:59:26	1199.99	22.57	7.00	584.00	0.89	15.39	0.10	31.96
Last 5	12:04:26	1499.99	22.41	7.00	586.33	0.61	15.40	0.09	32.18
Variance 0			0.00	0.03	3.32			-0.03	-1.96
Variance 1			0.17	0.01	1.12			-0.01	-0.75
Variance 2			-0.16	0.00	2.33			-0.01	0.22

Notes

MGWC-3 Sample Time: 1207. Purge rate: 250 mL/min. Purge Time: 1139 to 1204

Grab Samples

MGWC-3
Sample Time: 1207

Product Name: Low-Flow System

Date: 2017-10-10 10:06:52

Project Information:

Operator Name Pat Harold
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model HANNA HI9873

Pump Information:

Pump Model/Type ALEXIS PERI
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 40.00 ft

Pump placement from TOC 37.23 ft

Well Information:

Well ID MGWC-7
Well diameter 2 in
Well Total Depth 42.23 ft
Screen Length 10 ft
Depth to Water 18.44 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2685369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6.84 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:35:08	600.03	23.38	7.03	460.19	2.18	19.00	0.20	4.80
Last 5	09:40:08	900.03	23.32	6.69	462.45	1.56	19.01	0.17	-8.92
Last 5	09:45:08	1200.03	23.32	6.55	463.99	1.65	19.01	0.15	-15.95
Last 5	09:50:08	1499.90	23.43	6.50	466.18	1.95	19.01	0.15	-22.62
Last 5	09:55:08	1799.90	23.58	6.48	467.08	0.97	19.01	0.13	-25.91
Variance 0			0.01	-0.15	1.53			-0.02	-7.03
Variance 1			0.11	-0.05	2.19			-0.01	-6.67
Variance 2			0.15	-0.02	0.91			-0.01	-3.29

Notes

Purging started @ 0925/ended 0955. Parameters stabilized @ 0955. Sample MGWC-7 taken @ 1000.

Grab Samples

Product Name: Low-Flow System

Date: 2017-10-10 11:27:37

Project Information:

Operator Name Pat Harold
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449102
Turbidity Make/Model HANNA HI9873

Pump Information:

Pump Model/Type ALEXIS PERI
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 55 ft

Pump placement from TOC 47 ft

Well Information:

Well ID MGWC-8
Well diameter 2 in
Well Total Depth 52.79 ft
Screen Length 10 ft
Depth to Water 28.26 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3354883 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.21 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	10:50:01	299.99	25.10	5.03	545.42	1.55	28.49	0.27	114.72
Last 5	10:55:01	599.98	24.51	5.25	562.37	3.09	28.48	0.21	91.64
Last 5	11:00:01	899.98	24.87	5.52	585.34	2.42	28.49	0.17	74.11
Last 5	11:05:01	1199.98	24.89	5.59	590.69	2.68	28.49	0.15	70.61
Last 5	11:10:01	1499.94	24.90	5.60	588.93	2.53	28.49	0.14	69.41
Variance 0			0.36	0.27	22.97			-0.04	-17.53
Variance 1			0.02	0.07	5.34			-0.02	-3.50
Variance 2			0.01	0.00	-1.76			-0.01	-1.20

Notes

Purging started @ 1054/ stopped 1110. Parameters stabilized @ 1110. Samp MGWC-8 and DUP-1 taken @ 1115 w/ 200 ml/min

Grab Samples

MGWC-8

Sample taken @ 1115 w/ 200 ml/min

DUP-1

Sample taken @ 1115 w/ 200 ml/min

Product Name: Low-Flow System

Date: 2017-10-10 13:31:53

Project Information:

Operator Name H. Beaugh
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model Hanna HI98703

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter .17 in
Tubing Length 60 ft

Pump placement from TOC 50 ft

Well Information:

Well ID MGWC-12
Well diameter 2 in
Well Total Depth 55.72 ft
Screen Length 10 ft
Depth to Water 22.36 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.3578054 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 11.76 in
Total Volume Pumped 7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:03:28	600.03	22.62	6.91	283.68	2.36	23.28	0.12	9.06
Last 5	13:08:28	900.03	22.30	7.06	277.48	1.67	23.32	0.09	-4.74
Last 5	13:13:28	1200.01	22.30	7.15	270.33	1.42	23.33	0.07	-11.85
Last 5	13:18:28	1500.00	22.44	7.19	267.38	1.30	23.33	0.06	-18.27
Last 5	13:23:28	1800.00	22.35	7.24	262.99	0.97	23.34	0.06	-23.29
Variance 0			-0.00	0.09	-7.14			-0.02	-7.11
Variance 1			0.13	0.04	-2.95			-0.01	-6.42
Variance 2			-0.09	0.04	-4.39			0.00	-5.02

Notes

MGWC-12 Sample Time: 1326 Purge rate: 250 mL/min Purge Time: 1253 to 1323

Grab Samples

MGWC-12
Sample Time: 1326

Product Name: Low-Flow System

Date: 2017-04-18 11:28:24

Project Information:

Operator Name T.Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
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 LDPE
Tubing Diameter 0.17 in
Tubing Length 68 ft

Pump placement from TOC 58 ft

Well Information:

Well ID MGWA-5
Well diameter 2 in
Well Total Depth 62.10 ft
Screen Length 10 ft
Depth to Water 11.61 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3935128 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 7.92 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	11:02:09	600.03	23.82	7.40	260.15	0.12	21.14	0.57	5.49
Last 5	11:07:09	900.02	23.70	7.38	261.26	0.24	21.22	0.42	-5.13
Last 5	11:12:09	1200.03	23.70	7.42	260.42	0.17	21.27	0.34	-12.20
Last 5	11:17:09	1500.03	23.48	7.43	259.81	0.16	21.27	0.29	-17.77
Last 5	11:22:09	1800.02	22.80	7.43	260.43	0.18	21.27	0.26	-22.01
Variance 0			-0.00	0.03	-0.84			-0.08	-7.07
Variance 1			-0.22	0.02	-0.61			-0.05	-5.56
Variance 2			-0.67	-0.00	0.63			-0.03	-4.25

Notes

Purge started at 1052. Purge rate at 200 mL/min.
Parameters stable at 1122. Well sampled at 1130. Sample rate at 200 mL/min.

Grab Samples

MGWA-11
Sample at 1130

Product Name: Low-Flow System

Date: 2017-04-18 10:09:13

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC -Plant McIntosh
Site Name AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.175 in
Tubing Length 56 ft

Pump placement from TOC 48 ft

Well Information:

Well ID MGWA-10
Well diameter 2 in
Well Total Depth 53 ft
Screen Length 10 ft
Depth to Water 16.35 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3548709 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 33 in
Total Volume Pumped 11 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 10
Last 5	09:46:43	3000.02	21.90	5.63	72.25	0.05	19.86	2.39	84.41
Last 5	09:51:43	3300.03	21.90	5.64	72.98	0.27	19.91	2.94	85.03
Last 5	09:56:43	3600.02	21.95	5.64	73.74	0.19	19.91	1.62	86.31
Last 5	10:01:43	3900.02	22.03	5.65	73.79	0.11	19.91	1.59	87.28
Last 5	10:06:43	4200.03	22.17	5.64	72.97	0.22	19.91	1.63	87.64
Variance 0			0.05	0.00	0.77			-1.31	1.29
Variance 1			0.09	0.01	0.05			-0.03	0.97
Variance 2			0.13	-0.01	-0.82			0.04	0.36

Notes

Begin purging at 0856. Well stable at 1006. Sample at 1010. Sample rate 0.2L/min. Weather is sunny.

Grab Samples

MGWA - 10
1010

Product Name: Low-Flow System

Date: 2017-04-18 09:36:05

Project Information:

Operator Name T.Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
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 LDPE
Tubing Diameter 0.17 in
Tubing Length 60.6 ft

Pump placement from TOC 51.6 ft

Well Information:

Well ID MGWA-11
Well diameter 2 in
Well Total Depth 56.6 ft
Screen Length 10 ft
Depth to Water 19.29 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3604834 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.4 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:12:35	900.02	21.84	7.72	257.03	0.25	19.49	0.31	30.08
Last 5	09:17:35	1200.02	21.93	7.75	270.80	0.26	19.49	0.27	29.25
Last 5	09:22:35	1500.02	22.14	7.74	281.38	0.10	19.49	0.25	28.98
Last 5	09:27:35	1800.03	22.22	7.74	286.87	0.25	19.49	0.23	27.15
Last 5	09:32:35	2100.02	22.20	7.75	287.07	0.16	19.49	0.24	24.62
Variance 0			0.21	-0.01	10.58			-0.02	-0.27
Variance 1			0.08	0.00	5.49			-0.02	-1.83
Variance 2			-0.02	0.01	0.20			0.01	-2.53

Notes

Purge rate started at 8:57. Purge rate at 200ml/min.
Parameters stable at 0932. Well sampled at 0940. Sample rate at 200 mL/min.

Grab Samples

MGWA-11
Sampled at 0940

Product Name: Low-Flow System

Date: 2017-04-18 15:12:24

Project Information:

Operator Name T.Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449622
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Bladder QED
Tubing Type Dual LDPE
Tubing Diameter 0.17 in
Tubing Length 66 ft

Pump placement from TOC 51 ft

Well Information:

Well ID MGWC-1
Well diameter 2 in
Well Total Depth 56.08 ft
Screen Length 10 ft
Depth to Water 36.48 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.659586 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 18 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	14:49:03	899.91	22.67	6.83	541.82	13.60	37.97	0.25	25.87
Last 5	14:54:03	1199.91	22.54	6.82	551.81	8.89	37.97	0.21	24.79
Last 5	14:59:03	1499.91	22.27	6.86	559.89	4.60	37.97	0.19	22.33
Last 5	15:04:03	1799.91	22.14	6.90	565.12	4.51	37.97	0.16	19.85
Last 5	15:09:05	2101.91	22.09	6.93	569.30	2.72	37.97	0.15	18.67
Variance 0			-0.27	0.04	8.07			-0.02	-2.46
Variance 1			-0.13	0.05	5.23			-0.02	-2.48
Variance 2			-0.05	0.02	4.18			-0.01	-1.19

Notes

Purge started at 1434. Purge rate at 200 mL/min.
Parameters stable at 1509. Well sampled at 1515. Sample rate at 200 mL/min.

Grab Samples

MGWC-1
Sampled at 1515

Product Name: Low-Flow System

Date: 2017-04-19 09:53:03

Project Information:

Operator Name T.Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
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 LDPE
Tubing Diameter 0.17 in
Tubing Length 42 ft

Pump placement from TOC 32 ft

Well Information:

Well ID MGWC-2
Well diameter 2 in
Well Total Depth 37.26 ft
Screen Length 10 ft
Depth to Water 19.75 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2774638 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 9.49 in
Total Volume Pumped 3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	09:27:34	600.03	21.27	7.47	912.69	0.53	20.54	0.37	89.09
Last 5	09:32:34	900.03	21.33	7.48	911.95	0.54	20.54	0.32	87.92
Last 5	09:37:34	1200.02	21.42	7.48	910.19	0.44	20.54	0.31	87.83
Last 5	09:42:34	1499.97	21.51	7.49	908.96	0.36	20.54	0.28	86.94
Last 5	09:47:34	1799.97	21.57	7.48	908.62	0.31	20.54	0.26	87.16
Variance 0			0.09	-0.00	-1.76			-0.01	-0.10
Variance 1			0.09	0.01	-1.23			-0.03	-0.89
Variance 2			0.05	-0.01	-0.34			-0.02	0.22

Notes

Purge started at 09:17. Purge rate at 200 mL/min. Weather- overcast/cloudy 68F.

Purge rate lowered to 100 mL/min at 09:22 to prevent well draw down. Parameters stable at 09:47. Well sampled at 09:55. Sample rate at 100 mL/min. 2nd Rad sample taken.

Grab Samples

MGWC-2

Sampled at 09:55

2nd RAD

Sampled at 09:55

Product Name: Low-Flow System

Date: 2017-04-18 13:12:19

Project Information:

Operator Name Taylor Payne
Company Name ERM
Project Name GPC -Plant McIntosh
Site Name AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 501336
Turbidity Make/Model LaMotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.175 in
Tubing Length 45 ft

Pump placement from TOC 37 ft

Well Information:

Well ID MGWC-7
Well diameter 2 in
Well Total Depth 42.23 ft
Screen Length 10 ft
Depth to Water 19.06 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3028427 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6.72 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10
Last 5	12:49:56	1200.02	23.80	6.61	504.35	0.43	19.62	1.47	81.04
Last 5	12:54:56	1500.02	23.82	6.62	507.53	0.54	19.62	1.27	78.30
Last 5	12:59:56	1800.02	23.94	6.66	507.30	0.48	19.62	1.13	74.80
Last 5	13:04:56	2100.03	24.14	6.69	508.88	0.17	19.62	1.05	71.08
Last 5	13:09:56	2400.02	24.06	6.70	512.88	0.26	19.62	1.02	67.34
Variance 0			0.11	0.04	-0.23			-0.14	-3.50
Variance 1			0.20	0.03	1.58			-0.08	-3.73
Variance 2			-0.08	0.01	4.00			-0.03	-3.73

Notes

Begin purging at 1229. Stable at 1309. Sample at 1315. Sample rate 0.2L/min. Weather is sunny.

Grab Samples

MGWC-7
1315

Product Name: Low-Flow System

Date: 2017-04-18 13:42:01

Project Information:

Operator Name T.Thomas
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 449622
Turbidity Make/Model LaMotte 2020We

Pump Information:

Pump Model/Type Bladder QED
Tubing Type Dual LDPE
Tubing Diameter 0.17 in
Tubing Length 57.79 ft

Pump placement from TOC 47.79 ft

Well Information:

Well ID MGWC-8
Well diameter 2 in
Well Total Depth 52.79 ft
Screen Length 10 ft
Depth to Water 28.96 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.6229412 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2.76 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 100
Last 5	13:13:24	1200.02	23.88	5.33	444.46	0.98	29.19	0.25	58.10
Last 5	13:23:24	1800.03	23.87	5.31	431.84	0.74	29.19	0.17	56.77
Last 5	13:28:24	2100.02	23.82	5.82	490.62	0.74	29.19	0.15	53.19
Last 5	13:33:26	2402.03	23.92	5.85	497.57	0.59	29.19	0.14	56.53
Last 5	13:38:26	2701.92	23.88	5.85	498.55	0.40	29.19	0.13	55.64
Variance 0			-0.06	0.50	58.79			-0.02	-3.58
Variance 1			0.11	0.03	6.95			-0.01	3.35
Variance 2			-0.05	-0.00	0.97			-0.01	-0.89

Notes

Purge started at 12:53. Purge rate at 200ml/min.
Parameters stable at 1338. Well sampled at 1345. Sample rate at 200 mL/min.

Grab Samples

MGWC-8
Sampled at 1345.

Product Name: Low-Flow System

Date: 2017-04-25 12:25:28

Project Information:

Operator Name C. Hurdle
Company Name ERM
Project Name GPC - Plant McIntosh
Site Name AP
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 LDPE
Tubing Diameter 0.17 in
Tubing Length 60.17 ft

Pump placement from TOC 50.17 ft

Well Information:

Well ID MGWC-12
Well diameter 2 in
Well Total Depth 55.72 ft
Screen Length 10 ft
Depth to Water 23.32 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.3585641 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 8.64 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10	+/- 0.1	+/- 5%	+/- 5		+/- 10%	+/- 100
Last 5	12:01:08	900.03	20.27	6.78	283.22	0.30	24.02	0.30	49.52
Last 5	12:06:08	1200.03	20.13	6.87	274.86	0.26	24.04	0.25	41.98
Last 5	12:11:08	1500.03	20.22	6.92	268.60	0.03	24.04	0.23	35.92
Last 5	12:16:08	1800.03	20.42	6.99	268.99	0.07	24.04	0.21	28.43
Last 5	12:21:08	2100.03	20.66	7.02	264.88	0.14	24.04	0.20	24.04
Variance 0			0.08	0.05	-6.27			-0.02	-6.06
Variance 1			0.21	0.07	0.39			-0.02	-7.50
Variance 2			0.24	0.02	-4.11			-0.00	-4.38

Notes

Weather: 67F Partly Cloudy. Purge Time: 1145/1220. QA/QC Blind Duplicate Collected

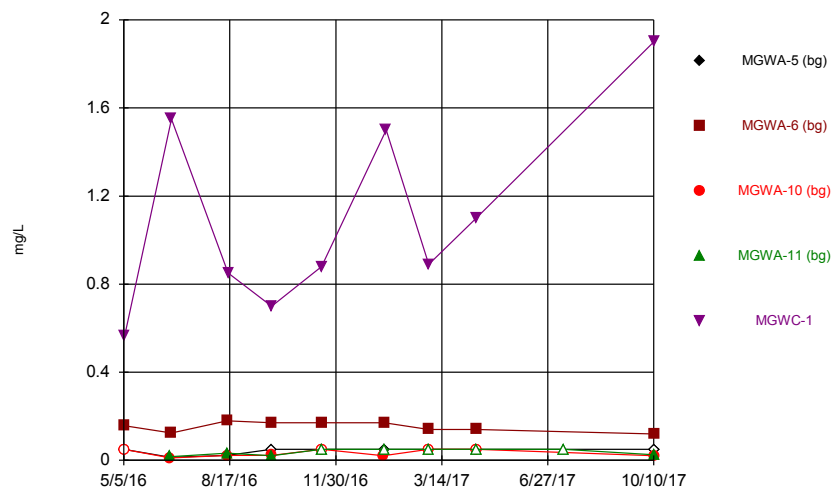
Grab Samples

MGWC-12
Sample Time 1225
DUP-1
QA/QC

Appendix B

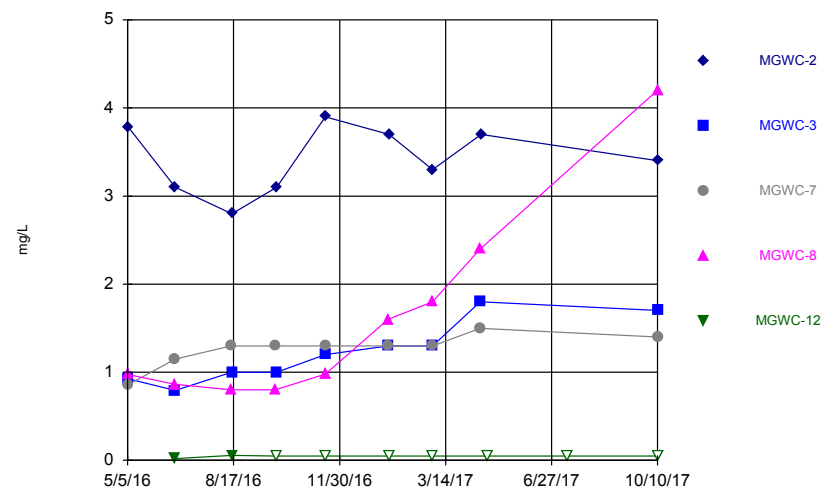
Statistical Analyses

Time Series



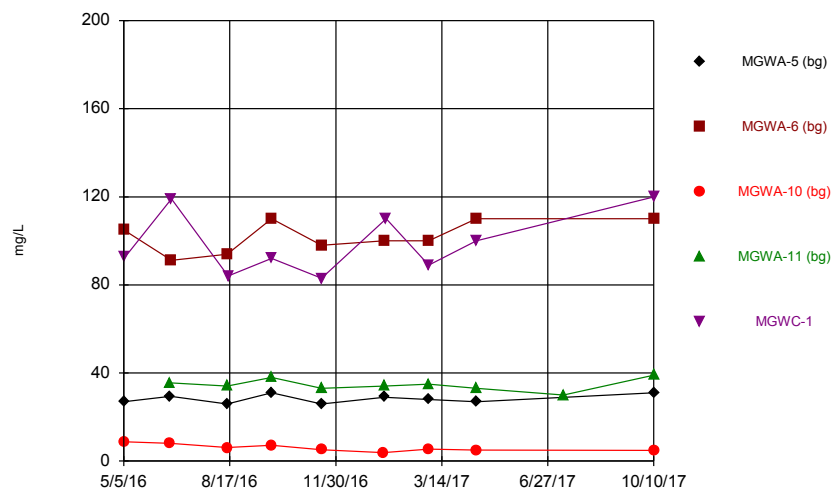
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Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Time Series



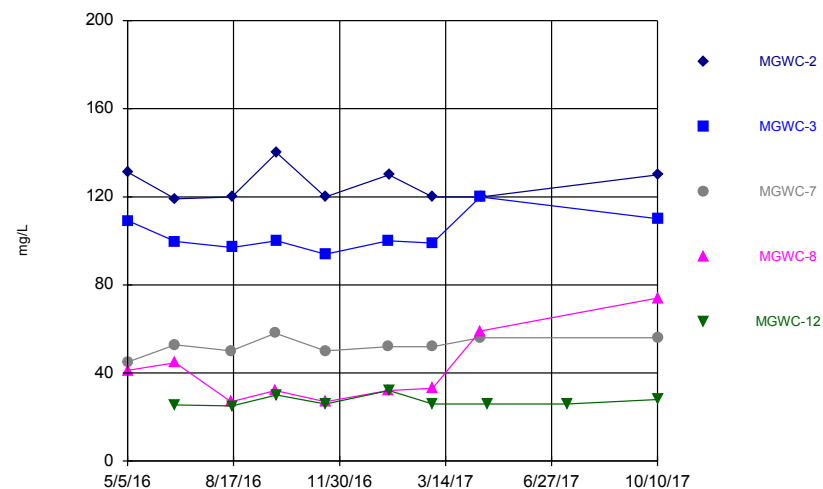
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Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Time Series



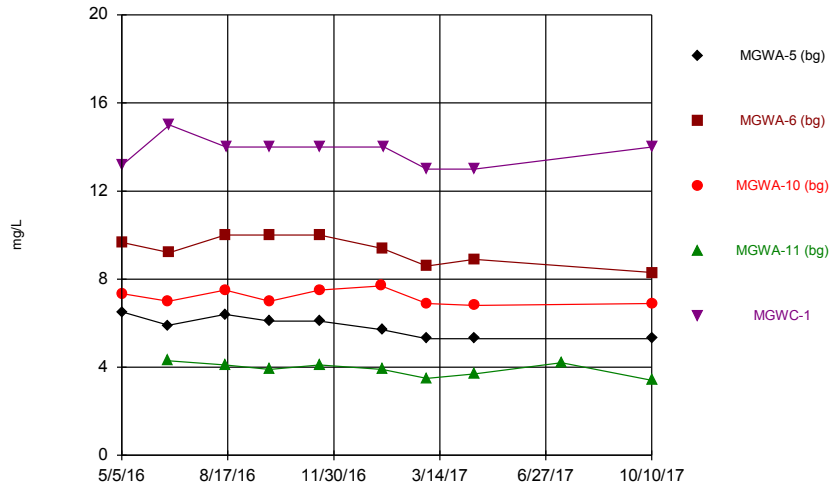
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Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Time Series



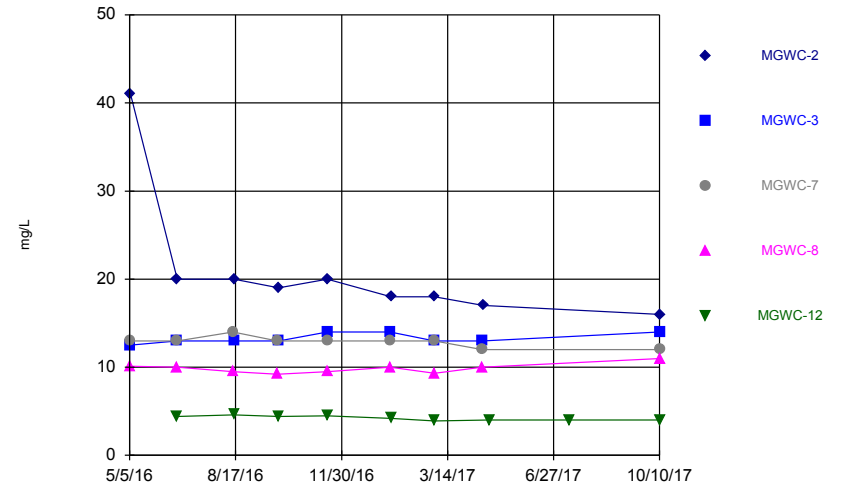
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Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Time Series



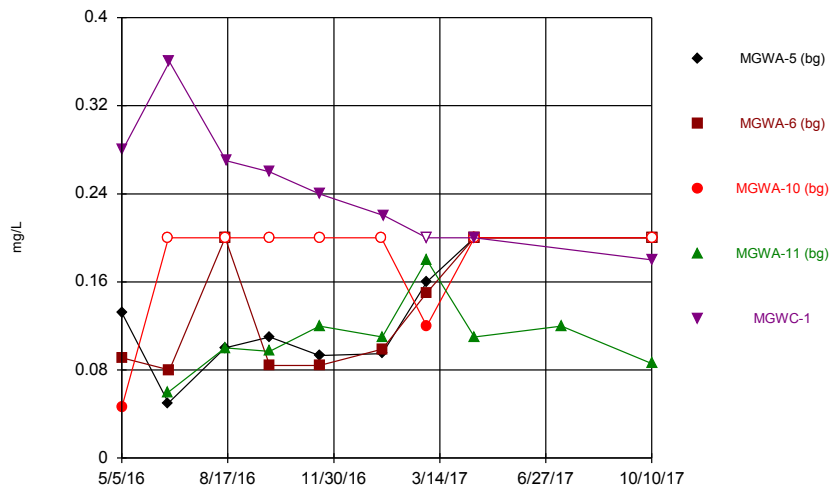
Constituent: Chloride Analysis Run 1/25/2018 11:57 PM View: 1. Time Series - All Wells
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Time Series



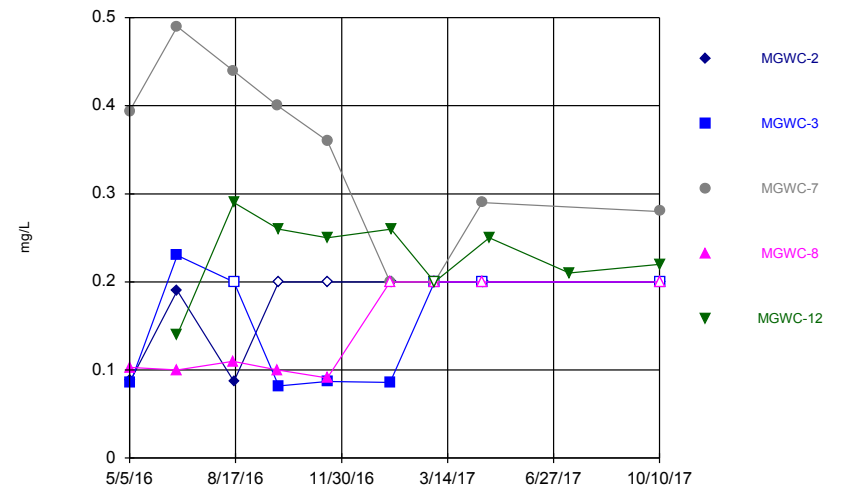
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Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Time Series



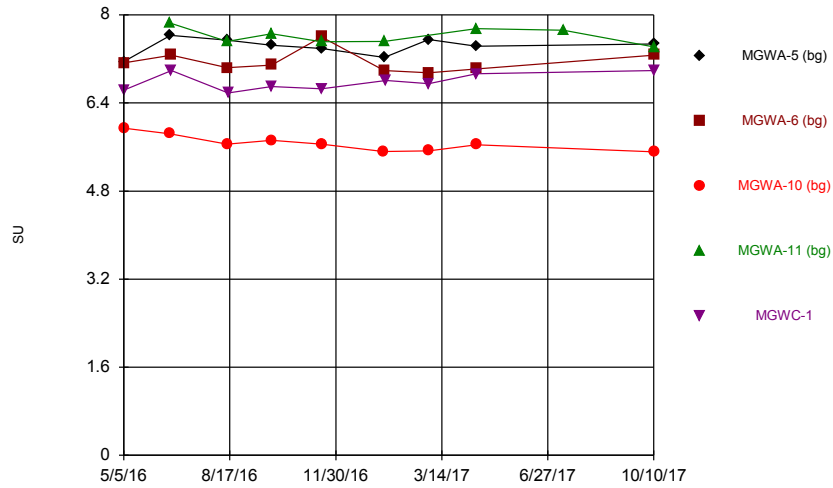
Constituent: Fluoride Analysis Run 1/25/2018 11:57 PM View: 1. Time Series - All Wells
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Time Series



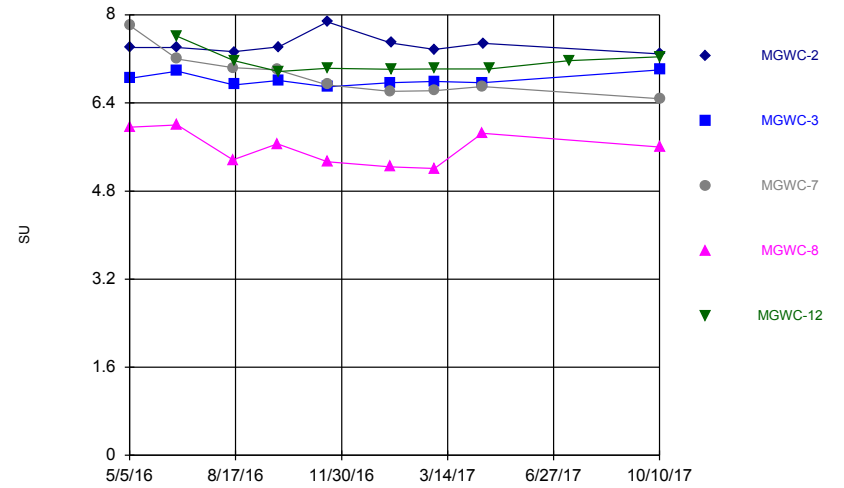
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Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Time Series



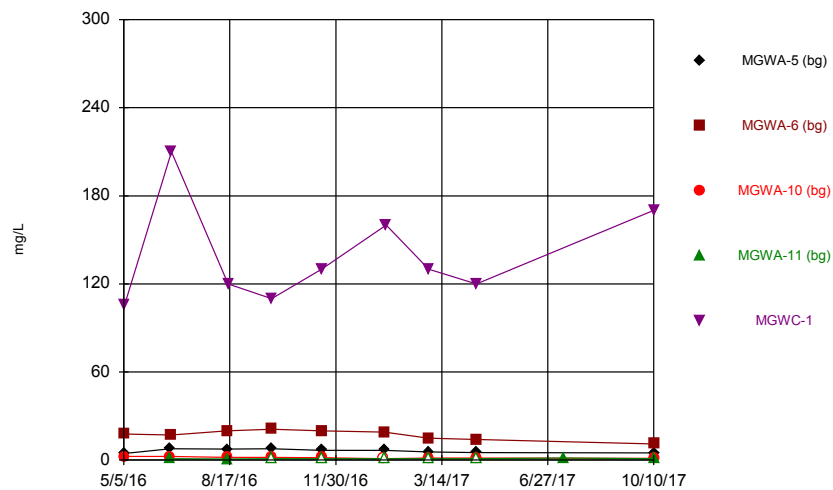
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 Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Time Series



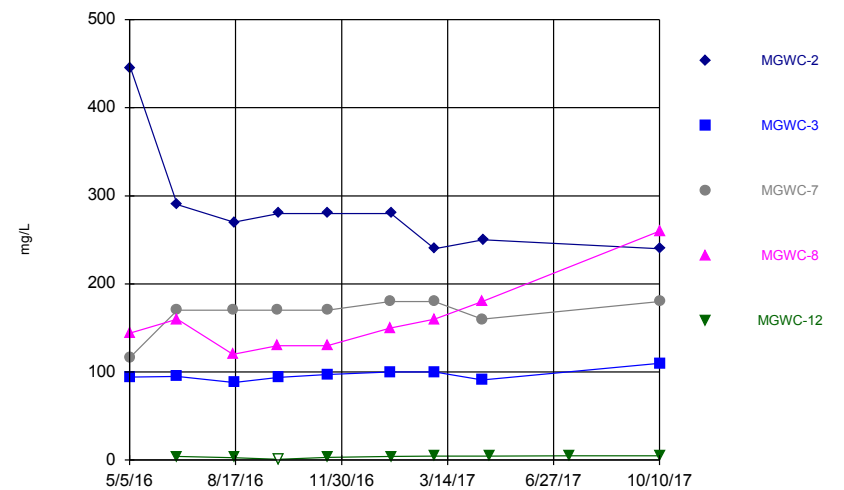
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 Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Time Series



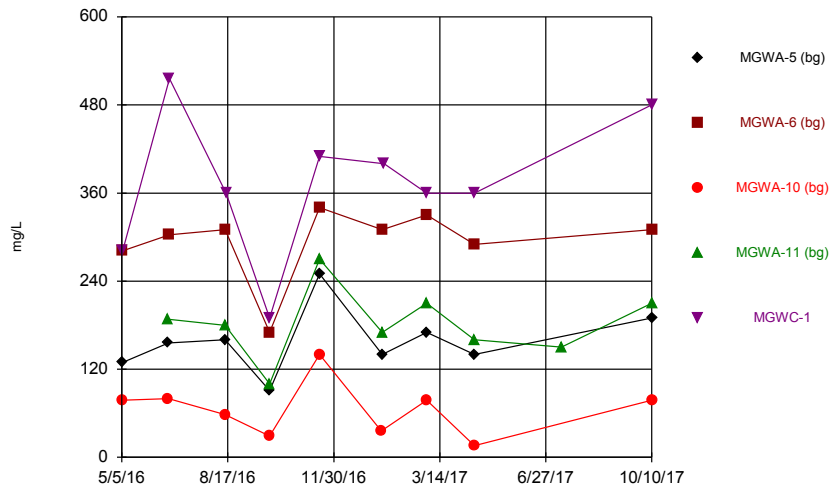
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 Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Time Series



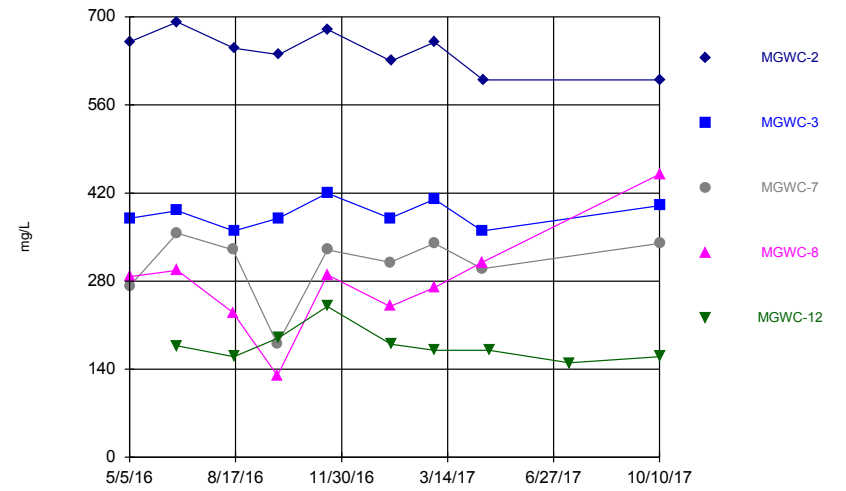
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 Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Time Series



Constituent: Total Dissolved Solids Analysis Run 1/25/2018 11:57 PM View: 1. Time Series - All Wells
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Time Series



Constituent: Total Dissolved Solids Analysis Run 1/25/2018 11:57 PM View: 1. Time Series - All Wells
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

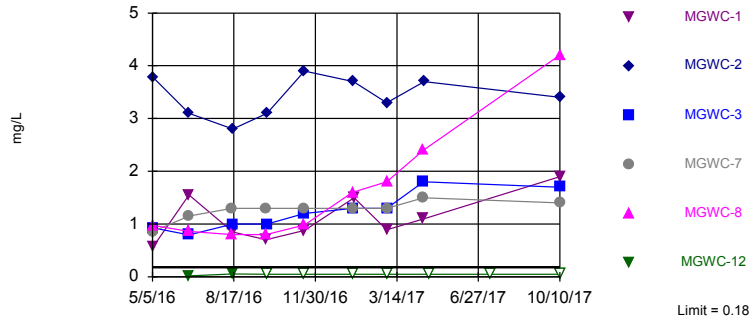
Interwell Prediction Limit

Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125 Printed 1/26/2018, 12:00 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	MGWC-1	0.18	n/a	10/10/2017	1.9	Yes	36	44.44	n/a	0.001386	NP (normality) 1 of 2
Boron (mg/L)	MGWC-2	0.18	n/a	10/10/2017	3.4	Yes	36	44.44	n/a	0.001386	NP (normality) 1 of 2
Boron (mg/L)	MGWC-3	0.18	n/a	10/10/2017	1.7	Yes	36	44.44	n/a	0.001386	NP (normality) 1 of 2
Boron (mg/L)	MGWC-7	0.18	n/a	10/10/2017	1.4	Yes	36	44.44	n/a	0.001386	NP (normality) 1 of 2
Boron (mg/L)	MGWC-8	0.18	n/a	10/10/2017	4.2	Yes	36	44.44	n/a	0.001386	NP (normality) 1 of 2
Boron (mg/L)	MGWC-12	0.18	n/a	10/10/2017	0.05ND	No	36	44.44	n/a	0.001386	NP (normality) 1 of 2
Chloride (mg/L)	MGWC-1	10.57	n/a	10/10/2017	14	Yes	36	0	No	0.001254	Param 1 of 2
Chloride (mg/L)	MGWC-2	10.57	n/a	10/10/2017	16	Yes	36	0	No	0.001254	Param 1 of 2
Chloride (mg/L)	MGWC-3	10.57	n/a	10/10/2017	14	Yes	36	0	No	0.001254	Param 1 of 2
Chloride (mg/L)	MGWC-7	10.57	n/a	10/10/2017	12	Yes	36	0	No	0.001254	Param 1 of 2
Chloride (mg/L)	MGWC-8	10.57	n/a	10/10/2017	11	Yes	36	0	No	0.001254	Param 1 of 2
Chloride (mg/L)	MGWC-12	10.57	n/a	10/10/2017	4	No	36	0	No	0.001254	Param 1 of 2
Fluoride (mg/L)	MGWC-1	0.2	n/a	10/10/2017	0.18	No	36	33.33	n/a	0.001386	NP (normality) 1 of 2
Fluoride (mg/L)	MGWC-2	0.2	n/a	10/10/2017	0.2ND	No	36	33.33	n/a	0.001386	NP (normality) 1 of 2
Fluoride (mg/L)	MGWC-3	0.2	n/a	10/10/2017	0.2ND	No	36	33.33	n/a	0.001386	NP (normality) 1 of 2
Fluoride (mg/L)	MGWC-7	0.2	n/a	10/10/2017	0.28	Yes	36	33.33	n/a	0.001386	NP (normality) 1 of 2
Fluoride (mg/L)	MGWC-8	0.2	n/a	10/10/2017	0.2ND	No	36	33.33	n/a	0.001386	NP (normality) 1 of 2
Fluoride (mg/L)	MGWC-12	0.2	n/a	10/10/2017	0.22	Yes	36	33.33	n/a	0.001386	NP (normality) 1 of 2
Sulfate (mg/L)	MGWC-1	21	n/a	10/10/2017	170	Yes	36	16.67	n/a	0.001386	NP (normality) 1 of 2
Sulfate (mg/L)	MGWC-2	21	n/a	10/10/2017	240	Yes	36	16.67	n/a	0.001386	NP (normality) 1 of 2
Sulfate (mg/L)	MGWC-3	21	n/a	10/10/2017	110	Yes	36	16.67	n/a	0.001386	NP (normality) 1 of 2
Sulfate (mg/L)	MGWC-7	21	n/a	10/10/2017	180	Yes	36	16.67	n/a	0.001386	NP (normality) 1 of 2
Sulfate (mg/L)	MGWC-8	21	n/a	10/10/2017	260	Yes	36	16.67	n/a	0.001386	NP (normality) 1 of 2
Sulfate (mg/L)	MGWC-12	21	n/a	10/10/2017	4.9	No	36	16.67	n/a	0.001386	NP (normality) 1 of 2

Exceeds Limit: MGWC-1, MGWC-2, MGWC-3, MGWC-7, MGWC-8

Prediction Limit
Interwell Non-parametric

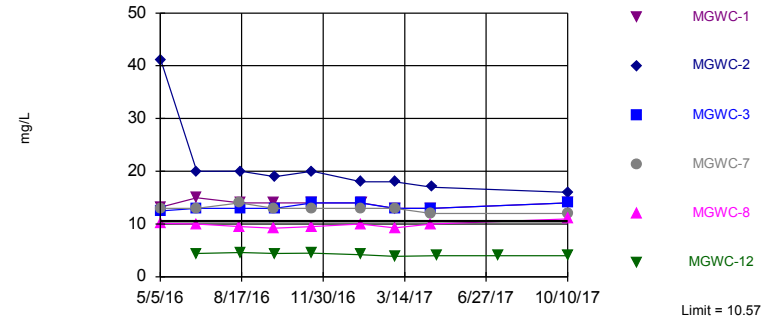


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 36 background values. 44.44% NDs. Annual per-constituent alpha = 0.0165. Individual comparison alpha = 0.001386 (1 of 2). Comparing 6 points to limit.

Constituent: Boron Analysis Run 1/26/2018 12:00 AM View: 2. Interwell UPL - All Wells - B, Cl, FI, SO4 Gr
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Exceeds Limit: MGWC-1, MGWC-2, MGWC-3, MGWC-7, MGWC-8

Prediction Limit
Interwell Parametric

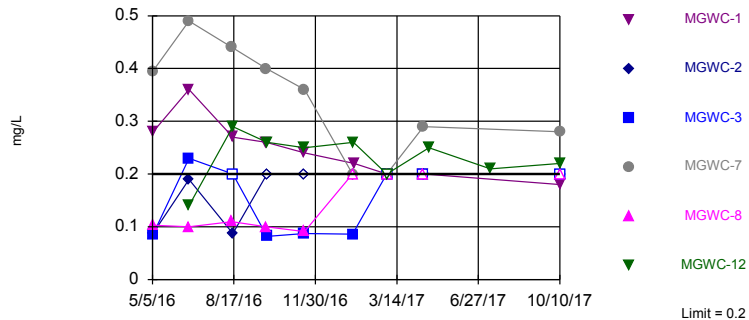


Background Data Summary: Mean=6.568, Std. Dev.=2.057, n=36. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9363, critical = 0.912. Kappa = 1.948 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001254. Comparing 6 points to limit.

Constituent: Chloride Analysis Run 1/26/2018 12:00 AM View: 2. Interwell UPL - All Wells - B, Cl, FI, SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Exceeds Limit: MGWC-7, MGWC-12

Prediction Limit
Interwell Non-parametric

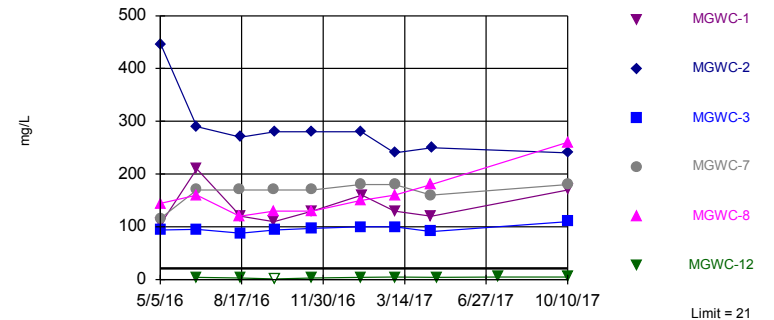


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 36 background values. 33.33% NDs. Annual per-constituent alpha = 0.0165. Individual comparison alpha = 0.001386 (1 of 2). Comparing 6 points to limit.

Constituent: Fluoride Analysis Run 1/26/2018 12:00 AM View: 2. Interwell UPL - All Wells - B, Cl, FI, SO4
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Exceeds Limit: MGWC-1, MGWC-2, MGWC-3, MGWC-7, MGWC-8

Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 36 background values. 16.67% NDs. Annual per-constituent alpha = 0.0165. Individual comparison alpha = 0.001386 (1 of 2). Comparing 6 points to limit.

Constituent: Sulfate Analysis Run 1/26/2018 12:00 AM View: 2. Interwell UPL - All Wells - B, Cl, FI, SO4 G
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 1/26/2018 12:00 AM View: 2. Interwell UPL - All Wells - B, Cl, Fl, SO4 Group

Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-7	MGWA-10 (bg)	MGWA-6 (bg)	MGWC-8	MGWA-5 (bg)	MGWC-3	MGWC-1	MGWC-2	MGWA-11 (bg)
5/5/2016	0.855	<0.05	0.157	0.976	<0.05				
5/6/2016						0.926	0.567	3.78	
6/20/2016		0.011 (JB)			0.013 (JB)				0.017 (J)
6/21/2016	1.15		0.124	0.862		0.792	1.55	3.1	
8/15/2016	1.3	0.022 (J)	0.18	0.8	0.023 (J)				0.032 (J)
8/16/2016						1	0.85	2.8	
9/28/2016	1.3	0.023 (J)	0.17	0.8	<0.05		0.7		0.021 (J)
9/29/2016						1		3.1	
11/16/2016	1.3	<0.05	0.17	0.98	<0.05	1.2	0.88	3.9	<0.05
1/16/2017		0.021 (J)							
1/17/2017	1.3		0.17	1.6	<0.05	1.3			<0.05
1/18/2017								3.7	
1/19/2017							1.5		
3/2/2017	1.3	<0.05	0.14	1.8	<0.05	1.3	0.89	3.3	<0.05
4/18/2017	1.5	<0.05	0.14	2.4	<0.05	1.8	1.1		<0.05
4/19/2017								3.7	
4/25/2017									
7/13/2017									<0.05
10/10/2017	1.4	0.021 (J)	0.12	4.2	<0.05	1.7	1.9	3.4	0.025 (J)

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 1/26/2018 12:00 AM View: 2. Interwell UPL - All Wells - B, Cl, FI, SO4 Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

MGWC-12

5/5/2016	
5/6/2016	
6/20/2016	
6/21/2016	0.0201 (J)
8/15/2016	
8/16/2016	0.055
9/28/2016	
9/29/2016	<0.05
11/16/2016	<0.05 (*)
1/16/2017	
1/17/2017	
1/18/2017	<0.05 (*)
1/19/2017	
3/2/2017	<0.05 (*)
4/18/2017	
4/19/2017	
4/25/2017	<0.05
7/13/2017	<0.05
10/10/2017	<0.05

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/26/2018 12:00 AM View: 2. Interwell UPL - All Wells - B, Cl, Fl, SO4 Group

Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-7	MGWA-10 (bg)	MGWA-6 (bg)	MGWC-8	MGWA-5 (bg)	MGWC-3	MGWC-1	MGWC-2	MGWA-11 (bg)
5/5/2016	13	7.35	9.67	10.1	6.51				
5/6/2016						12.5	13.2	41	
6/20/2016		7			5.9				4.3
6/21/2016	13 (B)		9.2 (B)	10 (B)		13 (B)	15 (B)	20 (B)	
8/15/2016	14	7.5	10	9.5	6.4				4.1
8/16/2016						13	14	20	
9/28/2016	13	7	10	9.2	6.1		14		3.9
9/29/2016						13		19	
11/16/2016	13	7.5	10	9.5	6.1	14	14	20	4.1
1/16/2017		7.7							
1/17/2017	13		9.4	10	5.7	14			3.9
1/18/2017								18	
1/19/2017							14		
3/2/2017	13	6.9	8.6	9.3	5.3	13	13	18	3.5
4/18/2017	12	6.8	8.9	10	5.3	13	13		3.7
4/19/2017								17	
4/25/2017									
7/13/2017									4.2
10/10/2017	12	6.9	8.3	11	5.3	14	14	16	3.4

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 1/26/2018 12:00 AM View: 2. Interwell UPL - All Wells - B, Cl, FI, SO4 Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

MGWC-12

5/5/2016	
5/6/2016	
6/20/2016	
6/21/2016	4.4 (B)
8/15/2016	
8/16/2016	4.6
9/28/2016	
9/29/2016	4.4
11/16/2016	4.5
1/16/2017	
1/17/2017	
1/18/2017	4.2
1/19/2017	
3/2/2017	3.9
4/18/2017	
4/19/2017	
4/25/2017	4
7/13/2017	4
10/10/2017	4

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/26/2018 12:00 AM View: 2. Interwell UPL - All Wells - B, Cl, Fl, SO4 Group

Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-7	MGWA-10 (bg)	MGWA-6 (bg)	MGWC-8	MGWA-5 (bg)	MGWC-3	MGWC-1	MGWC-2	MGWA-11 (bg)
5/5/2016	0.394	0.046 (J)	0.091 (J)	0.103 (J)	0.132 (J)				
5/6/2016						0.086 (J)	0.28 (J)	0.088 (J)	
6/20/2016		<0.2			0.05 (J)				0.06 (J)
6/21/2016	0.49		0.08 (J)	0.1 (J)		0.23 (J)	0.36	0.19 (J)	
8/15/2016	0.44	<0.2	<0.2	0.11 (J)	0.1 (J)				0.1 (J)
8/16/2016						<0.2	0.27	0.087 (J)	
9/28/2016	0.4	<0.2	0.084 (J)	0.1 (J)	0.11 (J)		0.26		0.097 (J)
9/29/2016						0.082 (J)		<0.2	
11/16/2016	0.36	<0.2	0.084 (J)	0.091 (J)	0.093 (J)	0.087 (J)	0.24	<0.2	0.12 (J)
1/16/2017		<0.2							
1/17/2017	0.2		0.099 (J)	<0.2	0.095 (J)	0.086 (J)			0.11 (J)
1/18/2017								<0.2	
1/19/2017							0.22		
3/2/2017	<0.2 (*)	0.12 (JB)	0.15 (JB)	<0.2 (*)	0.16 (JB)	<0.2 (*)	<0.2 (*)	<0.2 (*)	0.18 (JB)
4/18/2017	0.29	<0.2	<0.2	<0.2	<0.2	<0.2	0.2		0.11 (J)
4/19/2017								<0.2	
4/25/2017									
7/13/2017									0.12 (J)
10/10/2017	0.28	<0.2	<0.2	<0.2	<0.2	<0.2	0.18 (J)	<0.2	0.086 (J)

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 1/26/2018 12:00 AM View: 2. Interwell UPL - All Wells - B, Cl, Fl, SO4 Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

MGWC-12

5/5/2016	
5/6/2016	
6/20/2016	
6/21/2016	0.14 (J)
8/15/2016	
8/16/2016	0.29
9/28/2016	
9/29/2016	0.26
11/16/2016	0.25
1/16/2017	
1/17/2017	
1/18/2017	0.26
1/19/2017	
3/2/2017	<0.2 (*)
4/18/2017	
4/19/2017	
4/25/2017	0.25
7/13/2017	0.21
10/10/2017	0.22

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 12:00 AM View: 2. Interwell UPL - All Wells - B, Cl, Fl, SO4 Group

Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-7	MGWA-10 (bg)	MGWA-6 (bg)	MGWC-8	MGWA-5 (bg)	MGWC-3	MGWC-1	MGWC-2	MGWA-11 (bg)
5/5/2016	116	2.46	17.8	144	4.47				
5/6/2016						94.2	106	445	
6/20/2016		2.5			7.7				1
6/21/2016	170		17	160		95	210	290	
8/15/2016	170	1.9	20	120	7.5				0.73 (J)
8/16/2016						88	120	270	
9/28/2016	170	1.9	21	130	7.8		110		<1
9/29/2016						94		280	
11/16/2016	170 (F1)	1.7	20	130	6.7	97	130	280	<1
1/16/2017		<1							
1/17/2017	180		19	150	6.7	100			<1
1/18/2017								280	
1/19/2017							160		
3/2/2017	180	1.4	15	160	5.6	100	130	240	<1
4/18/2017	160	1.3	14	180	5.1	91	120		<1
4/19/2017								250	
4/25/2017									
7/13/2017									1.4
10/10/2017	180	1.1	11	260	4.9	110	170	240	0.87 (J)

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 1/26/2018 12:00 AM View: 2. Interwell UPL - All Wells - B, Cl, FI, SO4 Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

MGWC-12

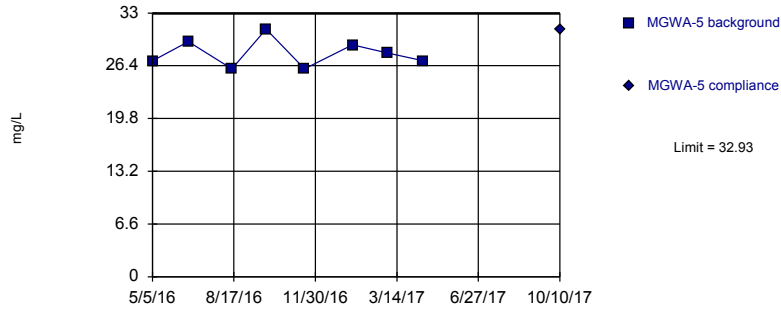
5/5/2016	
5/6/2016	
6/20/2016	
6/21/2016	4
8/15/2016	
8/16/2016	2.8
9/28/2016	
9/29/2016	<1
11/16/2016	3
1/16/2017	
1/17/2017	
1/18/2017	4.1
1/19/2017	
3/2/2017	4.6
4/18/2017	
4/19/2017	
4/25/2017	4.4
7/13/2017	4.8
10/10/2017	4.9

Intrawell Prediction Limit

Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125 Printed 1/26/2018, 12:03 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Calcium (mg/L)	MGWA-5	32.93	n/a	10/10/2017	31	No	8	0	No	0.001254	Param 1 of 2
Calcium (mg/L)	MGWA-6	120.6	n/a	10/10/2017	110	No	8	0	No	0.001254	Param 1 of 2
Calcium (mg/L)	MGWA-10	11.03	n/a	10/10/2017	4.8	No	8	0	No	0.001254	Param 1 of 2
Calcium (mg/L)	MGWA-11	40.59	n/a	10/10/2017	39	No	8	0	No	0.001254	Param 1 of 2
Calcium (mg/L)	MGWC-1	132.2	n/a	10/10/2017	120	No	8	0	No	0.001254	Param 1 of 2
Calcium (mg/L)	MGWC-2	147	n/a	10/10/2017	130	No	8	0	No	0.001254	Param 1 of 2
Calcium (mg/L)	MGWC-3	125.9	n/a	10/10/2017	110	No	8	0	No	0.001254	Param 1 of 2
Calcium (mg/L)	MGWC-7	63.18	n/a	10/10/2017	56	No	8	0	No	0.001254	Param 1 of 2
Calcium (mg/L)	MGWC-8	67.76	n/a	10/10/2017	74	Yes	8	0	No	0.001254	Param 1 of 2
Calcium (mg/L)	MGWC-12	32	n/a	10/10/2017	28	No	8	0	n/a	0.02144	NP (normality) 1 of 2
pH (SU)	MGWA-5	7.883	6.959	10/10/2017	7.47	No	8	0	No	0.000...	Param 1 of 2
pH (SU)	MGWA-6	7.736	6.537	10/10/2017	7.27	No	8	0	No	0.000...	Param 1 of 2
pH (SU)	MGWA-10	6.095	5.277	10/10/2017	5.51	No	8	0	No	0.000...	Param 1 of 2
pH (SU)	MGWA-11	8.069	7.226	10/10/2017	7.42	No	7	0	No	0.000...	Param 1 of 2
pH (SU)	MGWC-1	7.165	6.35	10/10/2017	6.99	No	8	0	No	0.000...	Param 1 of 2
pH (SU)	MGWC-2	7.87	7.33	10/10/2017	7.29	Yes	8	0	n/a	0.04288	NP (normality) 1 of 2
pH (SU)	MGWC-3	7.047	6.55	10/10/2017	7	No	8	0	No	0.000...	Param 1 of 2
pH (SU)	MGWC-7	8.11	5.818	10/10/2017	6.48	No	8	0	No	0.000...	Param 1 of 2
pH (SU)	MGWC-8	6.51	4.645	10/10/2017	5.6	No	8	0	No	0.000...	Param 1 of 2
pH (SU)	MGWC-12	7.61	6.97	10/10/2017	7.24	No	8	0	n/a	0.04288	NP (normality) 1 of 2
Total Dissolved Solids (mg/L)	MGWA-5	283.3	n/a	10/10/2017	190	No	8	0	No	0.001254	Param 1 of 2
Total Dissolved Solids (mg/L)	MGWA-6	441.3	n/a	10/10/2017	310	No	8	0	No	0.001254	Param 1 of 2
Total Dissolved Solids (mg/L)	MGWA-10	175.4	n/a	10/10/2017	78	No	8	0	No	0.001254	Param 1 of 2
Total Dissolved Solids (mg/L)	MGWA-11	317.4	n/a	10/10/2017	210	No	8	0	No	0.001254	Param 1 of 2
Total Dissolved Solids (mg/L)	MGWC-1	629.2	n/a	10/10/2017	480	No	8	0	No	0.001254	Param 1 of 2
Total Dissolved Solids (mg/L)	MGWC-2	733.6	n/a	10/10/2017	600	No	8	0	No	0.001254	Param 1 of 2
Total Dissolved Solids (mg/L)	MGWC-3	446	n/a	10/10/2017	400	No	8	0	No	0.001254	Param 1 of 2
Total Dissolved Solids (mg/L)	MGWC-7	460.2	n/a	10/10/2017	340	No	8	0	No	0.001254	Param 1 of 2
Total Dissolved Solids (mg/L)	MGWC-8	421.5	n/a	10/10/2017	450	Yes	8	0	No	0.001254	Param 1 of 2
Total Dissolved Solids (mg/L)	MGWC-12	256.9	n/a	10/10/2017	160	No	8	0	No	0.001254	Param 1 of 2

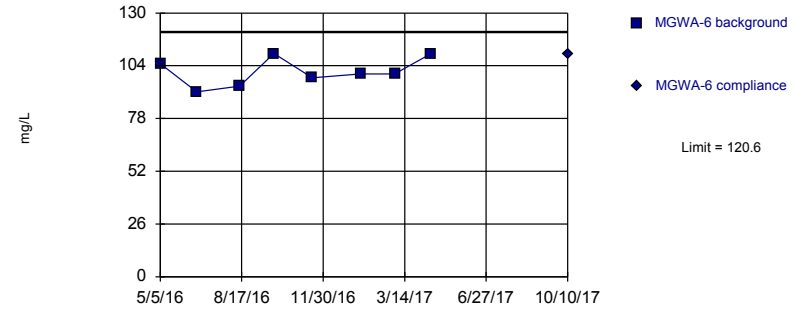
Within Limit Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=27.93, Std. Dev.=1.769, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9267, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS G
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

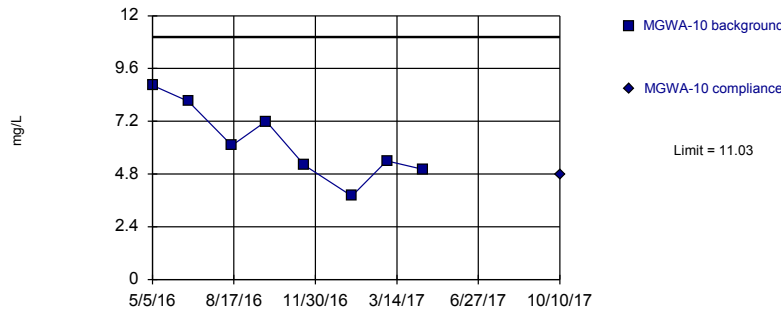
Within Limit Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=101, Std. Dev.=6.908, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9337, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS G
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

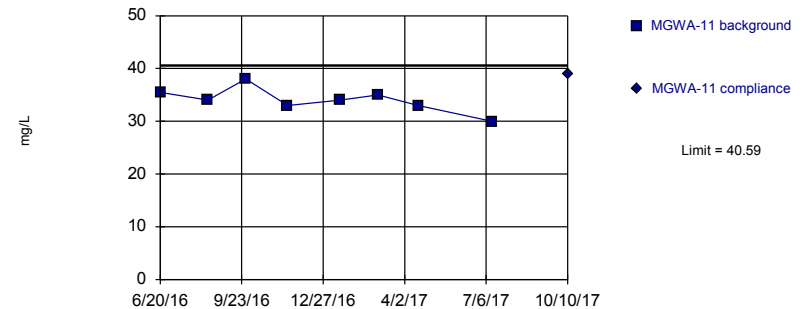
Within Limit Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=6.204, Std. Dev.=1.706, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9557, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS G
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Within Limit Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=34.06, Std. Dev.=2.306, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9612, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS G
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/26/2018 12:03 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWA-5	MGWA-5
5/5/2016	27	
6/20/2016	29.4	
8/15/2016	26	
9/28/2016	31	
11/16/2016	26	
1/17/2017	29	
3/2/2017	28	
4/18/2017	27	
10/10/2017		31

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/26/2018 12:03 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWA-6	MGWA-6
5/5/2016	105	
6/21/2016	91.2	
8/15/2016	94	
9/28/2016	110	
11/16/2016	98	
1/17/2017	100	
3/2/2017	100	
4/18/2017	110	
10/10/2017		110

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/26/2018 12:03 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWA-10	MGWA-10
5/5/2016	8.83	
6/20/2016	8.1	
8/15/2016	6.1	
9/28/2016	7.2	
11/16/2016	5.2	
1/16/2017	3.8	
3/2/2017	5.4	
4/18/2017	5	
10/10/2017		4.8

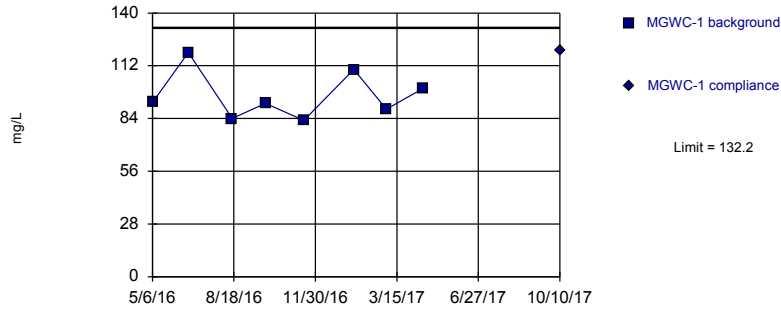
Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWA-11	MGWA-11
6/20/2016	35.5	
8/15/2016	34	
9/28/2016	38	
11/16/2016	33	
1/17/2017	34	
3/2/2017	35	
4/18/2017	33	
7/13/2017	30	
10/10/2017		39

Within Limit

Prediction Limit Intrawell Parametric

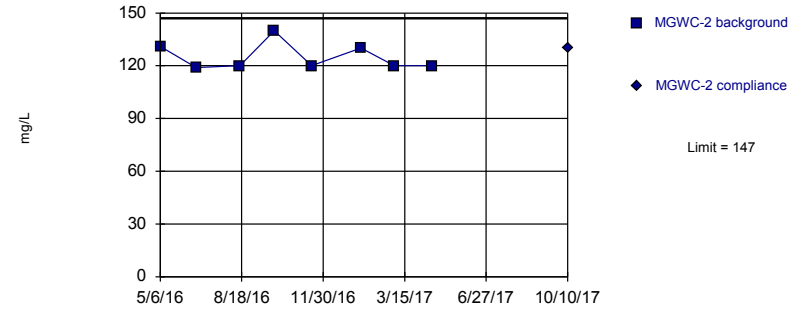


Background Data Summary: Mean=96.19, Std. Dev.=12.71, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9031, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS G
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Within Limit

Prediction Limit Intrawell Parametric

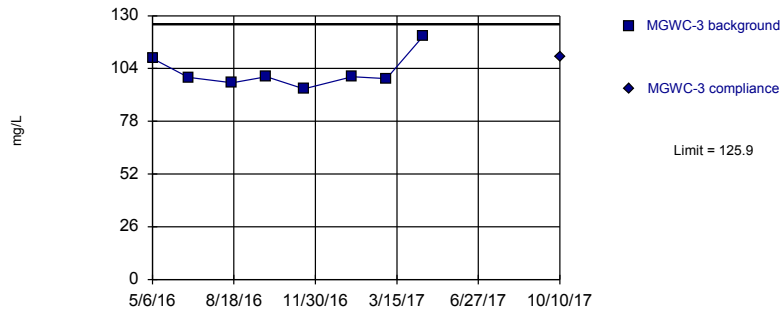


Background Data Summary: Mean=125, Std. Dev.=7.764, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.762, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS G
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Within Limit

Prediction Limit Intrawell Parametric

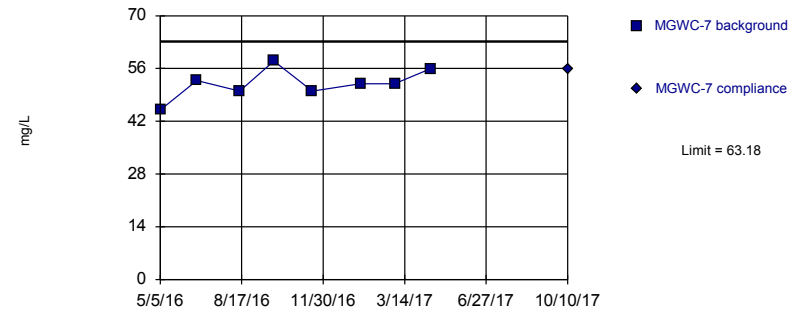


Background Data Summary: Mean=102.3, Std. Dev.=8.31, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8048, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS G
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Within Limit

Prediction Limit Intrawell Parametric



Background Data Summary: Mean=51.98, Std. Dev.=3.958, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.959, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS G
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/26/2018 12:03 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-1	MGWC-1
5/6/2016	92.5	
6/21/2016	119	
8/16/2016	84	
9/28/2016	92	
11/16/2016	83	
1/19/2017	110	
3/2/2017	89	
4/18/2017	100	
10/10/2017		120

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-2	MGWC-2
5/6/2016	131	
6/21/2016	119	
8/16/2016	120	
9/29/2016	140	
11/16/2016	120	
1/18/2017	130	
3/2/2017	120	
4/19/2017	120	
10/10/2017		130

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-3	MGWC-3
5/6/2016	109	
6/21/2016	99.7	
8/16/2016	97	
9/29/2016	100	
11/16/2016	94	
1/17/2017	100	
3/2/2017	99	
4/18/2017	120	
10/10/2017		110

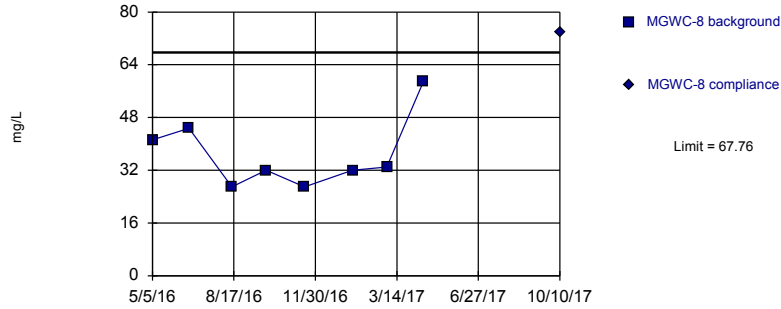
Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/26/2018 12:03 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-7	MGWC-7
5/5/2016	45	
6/21/2016	52.8	
8/15/2016	50	
9/28/2016	58	
11/16/2016	50	
1/17/2017	52	
3/2/2017	52	
4/18/2017	56	
10/10/2017		56

Exceeds Limit

Prediction Limit
Intrawell Parametric

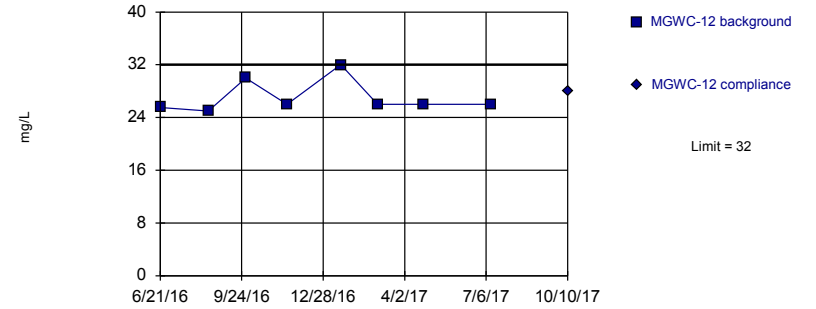


Background Data Summary: Mean=36.99, Std. Dev.=10.87, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8573, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS G
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Within Limit

Prediction Limit
Intrawell Non-parametric

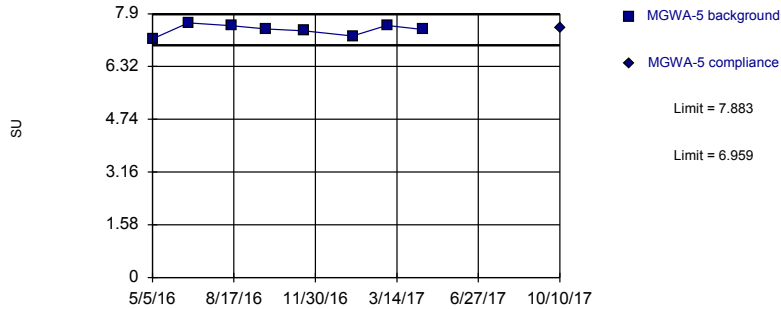


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 8 background values. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Constituent: Calcium Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS G
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Within Limits

Prediction Limit
Intrawell Parametric

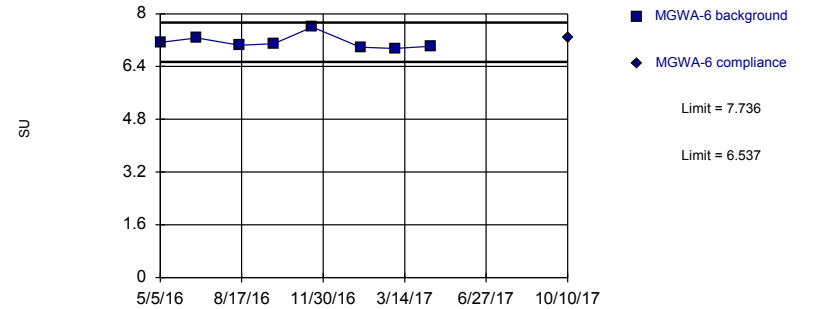


Background Data Summary: Mean=7.421, Std. Dev.=0.1631, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9425, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Within Limits

Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=7.136, Std. Dev.=0.2118, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8088, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-8	MGWC-8
5/5/2016	41.2	
6/21/2016	44.7	
8/15/2016	27	
9/28/2016	32	
11/16/2016	27	
1/17/2017	32	
3/2/2017	33	
4/18/2017	59	
10/10/2017		74

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-12	MGWC-12
6/21/2016	25.5	
8/16/2016	25	
9/29/2016	30	
11/16/2016	26	
1/18/2017	32	
3/2/2017	26	
4/25/2017	26	
7/13/2017	26	
10/10/2017		28

Prediction Limit

Constituent: pH (SU) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWA-5	MGWA-5
5/5/2016	7.15	
6/20/2016	7.63	
8/15/2016	7.54	
9/28/2016	7.45	
11/16/2016	7.39	
1/17/2017	7.23	
3/2/2017	7.55	
4/18/2017	7.43	
10/10/2017		7.47

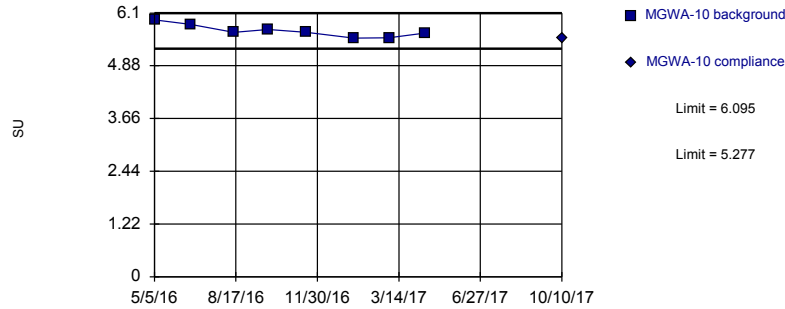
Prediction Limit

Constituent: pH (SU) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWA-6	MGWA-6
5/5/2016	7.13	
6/21/2016	7.27	
8/15/2016	7.04	
9/28/2016	7.09	
11/16/2016	7.6	
1/17/2017	6.99	
3/2/2017	6.95	
4/18/2017	7.02	
10/10/2017		7.27

Within Limits

Prediction Limit
Intrawell Parametric

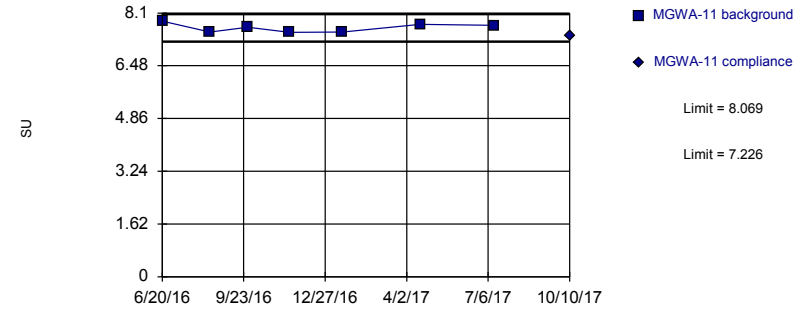


Background Data Summary: Mean=5.686, Std. Dev.=0.1444, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9186, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Within Limits

Prediction Limit
Intrawell Parametric

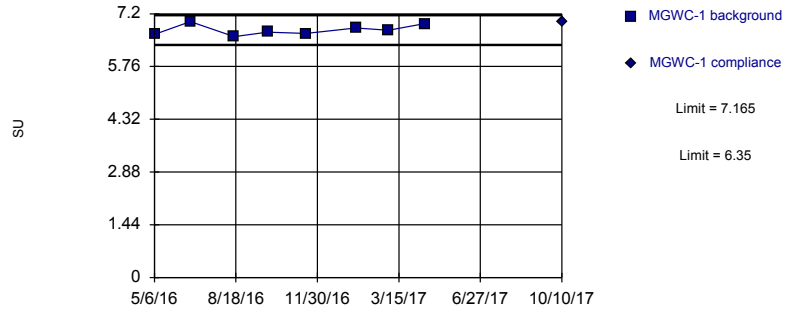


Background Data Summary: Mean=7.647, Std. Dev.=0.1344, n=7. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.885, critical = 0.73. Kappa = 3.136 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Within Limits

Prediction Limit
Intrawell Parametric

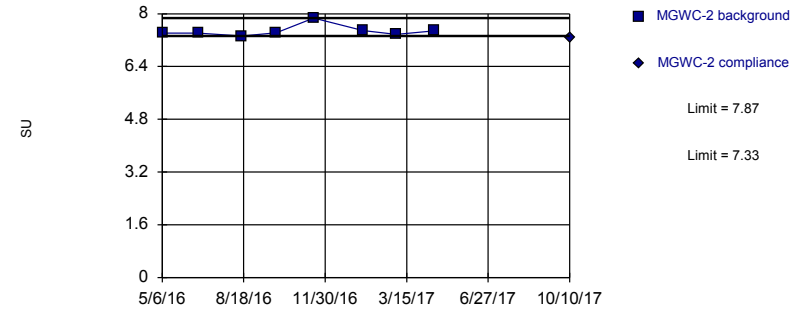


Background Data Summary: Mean=6.758, Std. Dev.=0.1438, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9398, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Exceeds 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 = 0.08484. Individual comparison alpha = 0.04288 (1 of 2).

Constituent: pH Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Prediction Limit

Constituent: pH (SU) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWA-10	MGWA-10
5/5/2016	5.94	
6/20/2016	5.84	
8/15/2016	5.65	
9/28/2016	5.72	
11/16/2016	5.65	
1/16/2017	5.52	
3/2/2017	5.53	
4/18/2017	5.64	
10/10/2017		5.51

Prediction Limit

Constituent: pH (SU) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWA-11	MGWA-11
6/20/2016	7.85	
8/15/2016	7.52	
9/28/2016	7.66	
11/16/2016	7.51	
1/17/2017	7.52	
4/18/2017	7.75	
7/13/2017	7.72 (D)	
10/10/2017		7.42

Prediction Limit

Constituent: pH (SU) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-1	MGWC-1
5/6/2016	6.64	
6/21/2016	6.99	
8/16/2016	6.58	
9/28/2016	6.7	
11/16/2016	6.66	
1/19/2017	6.81	
3/2/2017	6.75	
4/18/2017	6.93	
10/10/2017		6.99

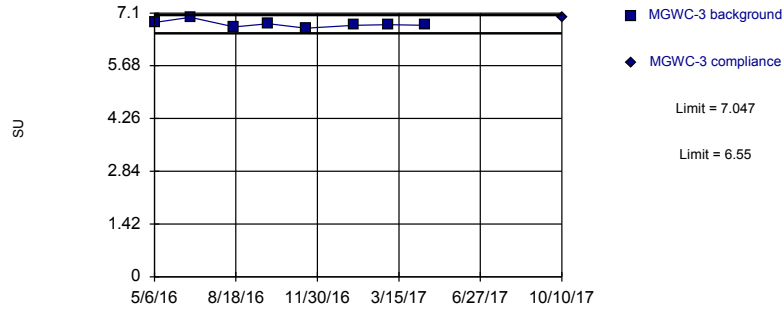
Prediction Limit

Constituent: pH (SU) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-2	MGWC-2
5/6/2016	7.41	
6/21/2016	7.41	
8/16/2016	7.33	
9/29/2016	7.42	
11/16/2016	7.87	
1/18/2017	7.49	
3/2/2017	7.37	
4/19/2017	7.48	
10/10/2017		7.29

Within Limits

Prediction Limit
Intrawell Parametric

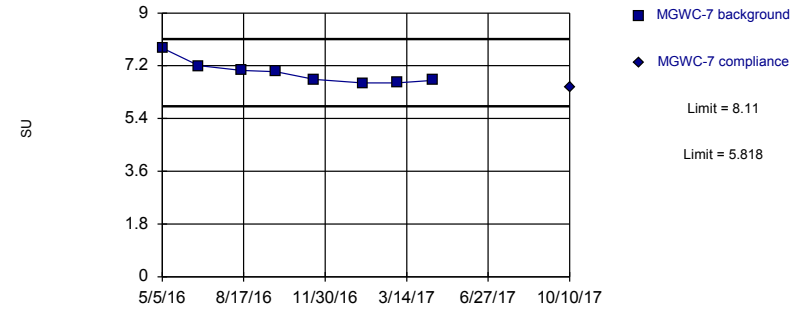


Background Data Summary: Mean=6.799, Std. Dev.=0.08774, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.911, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Within Limits

Prediction Limit
Intrawell Parametric

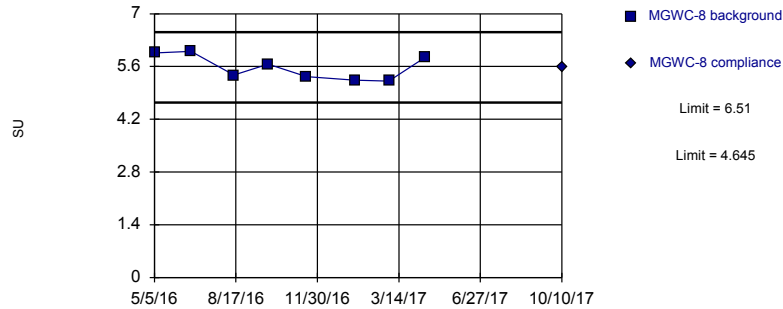


Background Data Summary: Mean=6.964, Std. Dev.=0.4047, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8447, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Within Limits

Prediction Limit
Intrawell Parametric

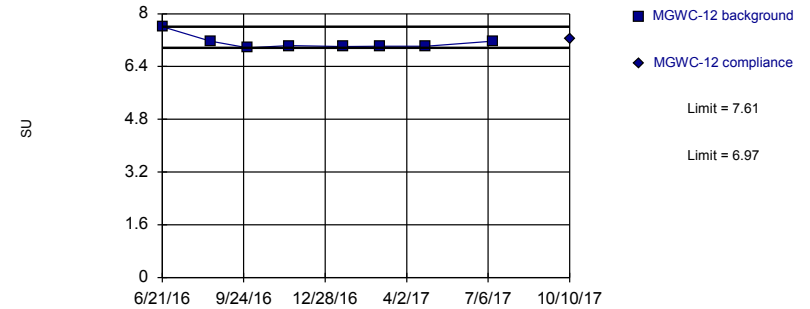


Background Data Summary: Mean=5.578, Std. Dev.=0.3293, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8703, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

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 = 0.08484. Individual comparison alpha = 0.04288 (1 of 2).

Constituent: pH Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Prediction Limit

Constituent: pH (SU) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-3	MGWC-3
5/6/2016	6.85	
6/21/2016	6.98	
8/16/2016	6.73	
9/29/2016	6.81	
11/16/2016	6.69	
1/17/2017	6.77	
3/2/2017	6.79	
4/18/2017	6.77	
10/10/2017		7

Prediction Limit

Constituent: pH (SU) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-7	MGWC-7
5/5/2016	7.81	
6/21/2016	7.2	
8/15/2016	7.04	
9/28/2016	7	
11/16/2016	6.73	
1/17/2017	6.61	
3/2/2017	6.62	
4/18/2017	6.7	
10/10/2017		6.48

Prediction Limit

Constituent: pH (SU) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-8	MGWC-8
5/5/2016	5.96	
6/21/2016	6	
8/15/2016	5.37	
9/28/2016	5.66	
11/16/2016	5.33	
1/17/2017	5.24	
3/2/2017	5.21	
4/18/2017	5.85	
10/10/2017		5.6

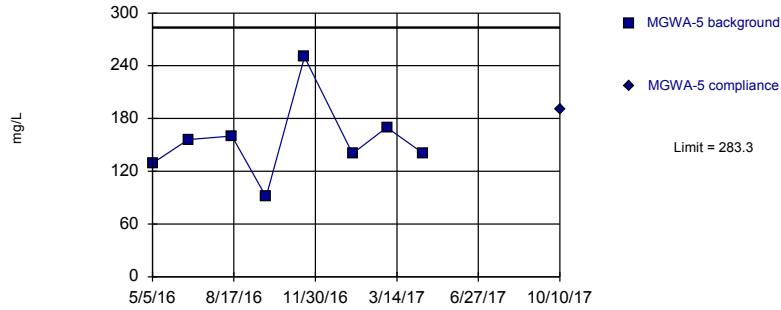
Prediction Limit

Constituent: pH (SU) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-12	MGWC-12
6/21/2016	7.61	
8/16/2016	7.17	
9/29/2016	6.97	
11/16/2016	7.03	
1/18/2017	7.01	
3/2/2017	7.02	
4/25/2017	7.02	
7/13/2017	7.17	
10/10/2017		7.24

Within Limit

Prediction Limit
Intrawell Parametric

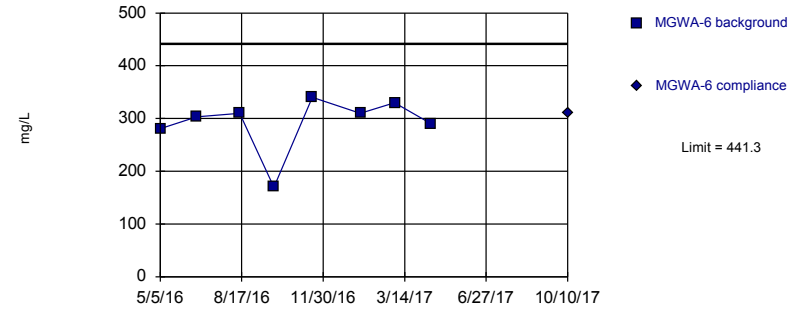


Background Data Summary: Mean=154.5, Std. Dev.=45.51, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.89, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Total Dissolved Solids Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Within Limit

Prediction Limit
Intrawell Parametric

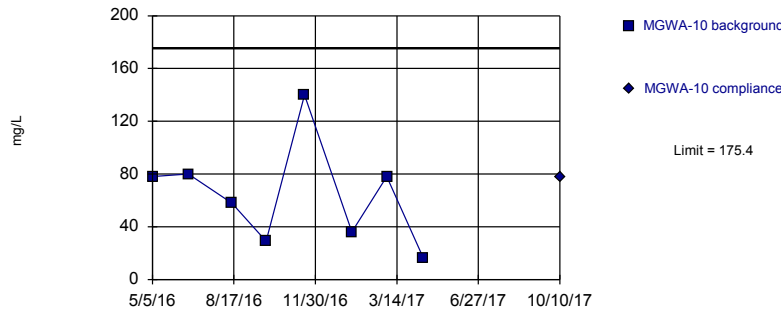


Background Data Summary: Mean=291.8, Std. Dev.=52.81, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7656, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Total Dissolved Solids Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Within Limit

Prediction Limit
Intrawell Parametric

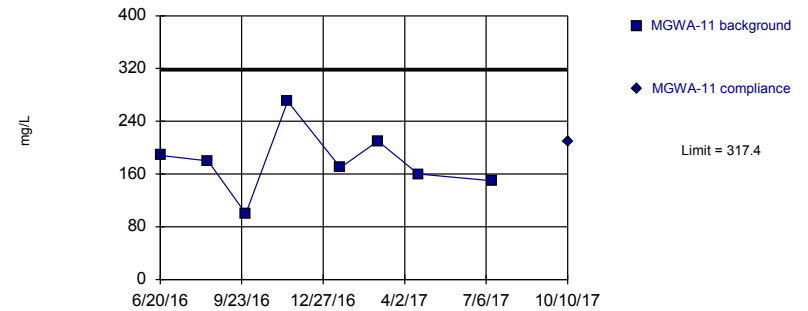


Background Data Summary: Mean=64.38, Std. Dev.=39.23, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9214, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Total Dissolved Solids Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Within Limit

Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=178.5, Std. Dev.=49.06, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9621, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Total Dissolved Solids Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWA-5	MGWA-5
5/5/2016	129	
6/20/2016	156	
8/15/2016	160	
9/28/2016	91	
11/16/2016	250	
1/17/2017	140	
3/2/2017	170	
4/18/2017	140	
10/10/2017		190

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWA-6	MGWA-6
5/5/2016	281	
6/21/2016	303	
8/15/2016	310	
9/28/2016	170	
11/16/2016	340	
1/17/2017	310	
3/2/2017	330	
4/18/2017	290	
10/10/2017		310

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

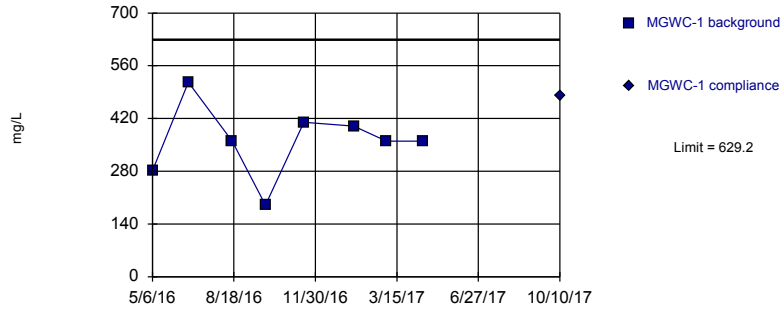
	MGWA-10	MGWA-10
5/5/2016	78	
6/20/2016	80	
8/15/2016	58	
9/28/2016	29	
11/16/2016	140	
1/16/2017	36	
3/2/2017	78	
4/18/2017	16	
10/10/2017		78

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWA-11	MGWA-11
6/20/2016	188	
8/15/2016	180	
9/28/2016	100	
11/16/2016	270	
1/17/2017	170	
3/2/2017	210	
4/18/2017	160	
7/13/2017	150	
10/10/2017		210

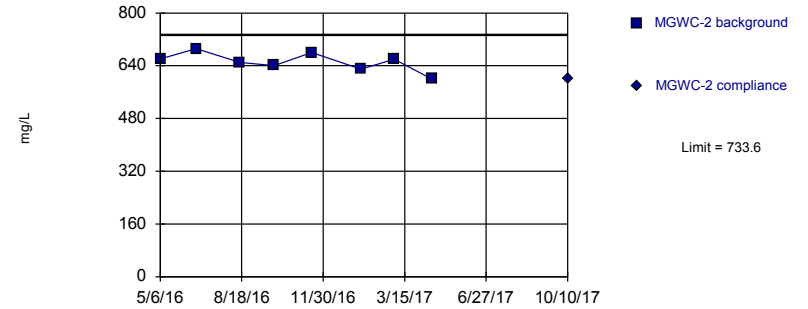
Within Limit Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=359.8, Std. Dev.=95.18, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9447, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Total Dissolved Solids Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

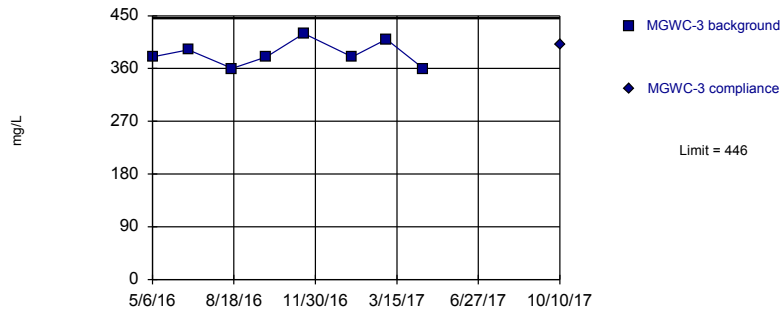
Within Limit Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=651.6, Std. Dev.=28.94, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9778, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Total Dissolved Solids Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

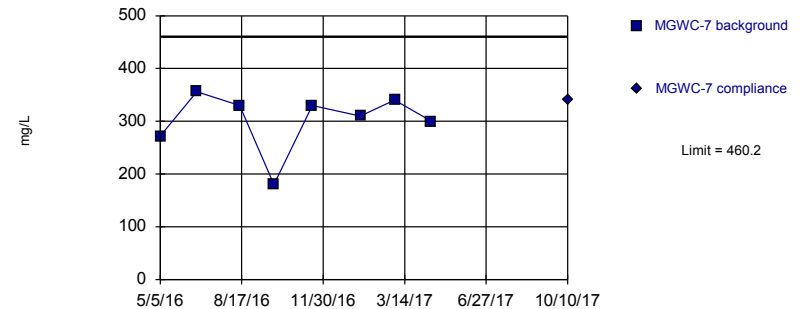
Within Limit Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=385.3, Std. Dev.=21.46, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9121, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Total Dissolved Solids Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Within Limit Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=302.3, Std. Dev.=55.78, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8291, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Total Dissolved Solids Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-1	MGWC-1
5/6/2016	282	
6/21/2016	516	
8/16/2016	360	
9/28/2016	190	
11/16/2016	410	
1/19/2017	400	
3/2/2017	360	
4/18/2017	360	
10/10/2017		480

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-2	MGWC-2
5/6/2016	661	
6/21/2016	692	
8/16/2016	650	
9/29/2016	640	
11/16/2016	680	
1/18/2017	630	
3/2/2017	660	
4/19/2017	600	
10/10/2017		600

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-3	MGWC-3
5/6/2016	380	
6/21/2016	392	
8/16/2016	360	
9/29/2016	380	
11/16/2016	420	
1/17/2017	380	
3/2/2017	410	
4/18/2017	360	
10/10/2017		400

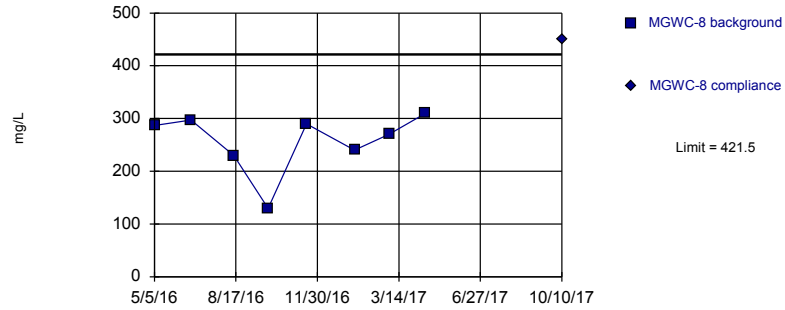
Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-7	MGWC-7
5/5/2016	272	
6/21/2016	356	
8/15/2016	330	
9/28/2016	180	
11/16/2016	330	
1/17/2017	310	
3/2/2017	340	
4/18/2017	300	
10/10/2017		340

Exceeds Limit

Prediction Limit
Intrawell Parametric

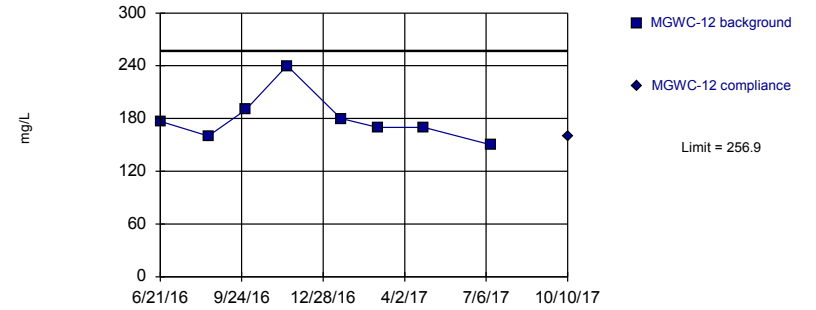


Background Data Summary: Mean=256.8, Std. Dev.=58.2, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8242, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Total Dissolved Solids Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Within Limit

Prediction Limit
Intrawell Parametric



Background Data Summary: Mean=179.6, Std. Dev.=27.28, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8389, critical = 0.749. Kappa = 2.831 (c=7, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Total Dissolved Solids Analysis Run 1/26/2018 12:02 AM View: 3. Intrawell UPL - All Wells - Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-8	MGWC-8
5/5/2016	287	
6/21/2016	297	
8/15/2016	230	
9/28/2016	130	
11/16/2016	290	
1/17/2017	240	
3/2/2017	270	
4/18/2017	310	
10/10/2017		450

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 1/26/2018 12:03 AM View: 3. IntraWell UPL - All Wells - Ca, pH, TDS Group
Plant McIntosh Client: Southern Company Data: CCR McIntosh Ash Pond 20180125

	MGWC-12	MGWC-12
6/21/2016	177	
8/16/2016	160	
9/29/2016	190	
11/16/2016	240	
1/18/2017	180	
3/2/2017	170	
4/25/2017	170	
7/13/2017	150	
10/10/2017		160